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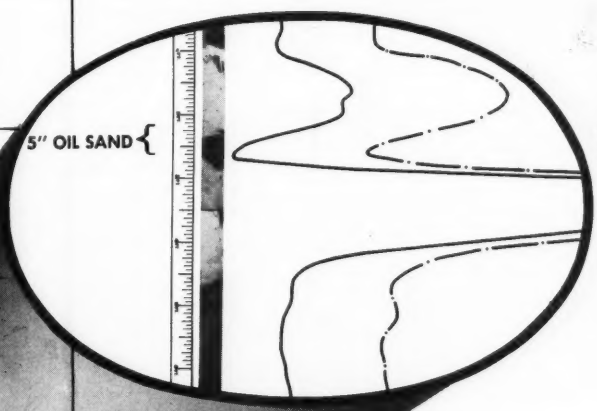
# PHOTOGRAPHS OF CORES PROVE MICROLOG DETAIL

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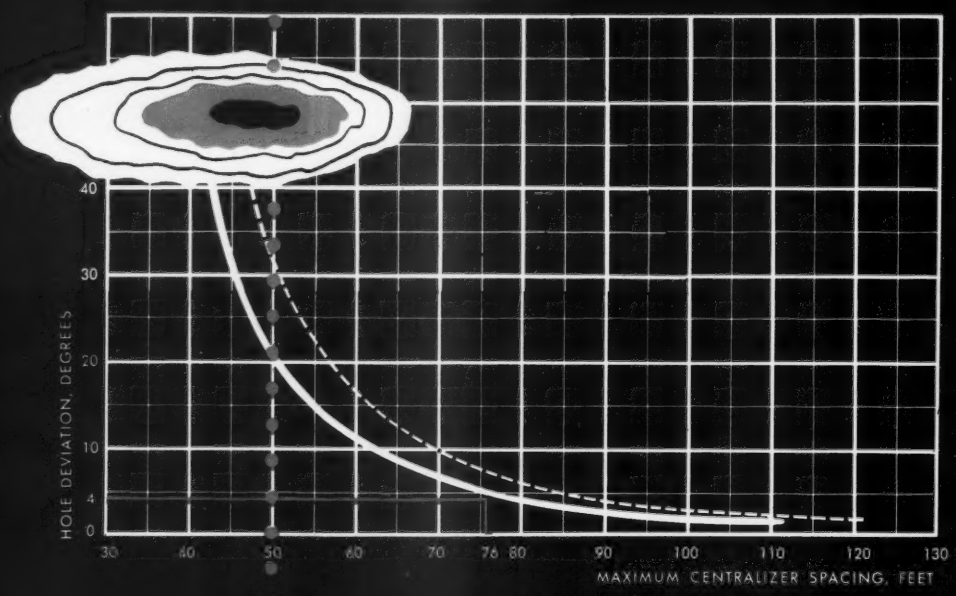


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OIL WORLD

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# Washington Highlights

Congress was warned by Interior Secretary Chapman that the country will be confronted with possible gasoline rationing in eight or 10 months unless oil companies are given more steel for pipelines. The Secretary indicated that the nation would have enough gasoline for its needs but for lack of pipelines would be unable to move it to the areas needing it most of all. He asserted that the petroleum industry has not been getting sufficient steel allocations from the Defense Production Administration to fill its needs. He said particularly that additional steel is necessary for the building of two pipelines in the West and Southwest. Continuing, Chapman made known that the PAD requested the industry be given 2,135,000 tons of steel for October, November and December. However, it was denoted in official circles that DPA has agreed to apportion only 1,862,000 tons for the period. Some 300,000 barrels of crude oil are being "Backed up" daily in the West Texas-New Mexico district by the absence of adequate pipeline carrying capacity, Chapman reported. He called attention to an additional 100,000 barrels of oil a day which could be put to use by Midwest refineries if it was not being held back in the Rocky Mountain region awaiting the completion of the Platte pipeline. The Federal official stated that domestic consumption of petroleum products soared 12 per cent in the year ended last April 1 and will continue to increase. He concluded that unless steel is made available to the industry there will not be enough oil to satisfy demand. Senator Clinton P. Anderson, Democrat of New Mexico, viewed steel allocations as not much more than "a hunting license." Under the present method a steel user must find the steel after he obtains his allocation.

---

Senate Majority Leader McFarland, Democrat of Arizona, has expressed hope of speeding up action of four "must" measures so that Congress can recess sometime in September.

---

The National Production Authority has delegated the necessary power to three field offices on the Pacific Coast to process applications for construction of service stations and other buildings devoted to commerce. Locations of the offices are Chamber of Commerce Building, 435 West Broadway, San Diego; 1479 Wells Avenue, Reno, Nevada; and 808 North First Street, Phoenix, Arizona.

---

By an 18 to 6 vote the House Judiciary Committee has turned down an Administration measure to grant the Federal Government more of the control and revenue from oil-rich tidal lands and instead approved a "state rights" bill. It is almost identical with a bill approved by the committee during the last Congress. It gives to the states full control and all the revenue from resources in water up to the traditional state limits. Beyond these boundaries the Federal Government would have jurisdiction and the state would get 37½ per cent of the revenue.

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The Senate recently extended until January 31, 1952, the inquiry of the Senate Interior Committee on U. S. fuel reserves. The committee, headed by Senator O'Mahoney, is designed to delve into the possible establishment of a national fuels policy.

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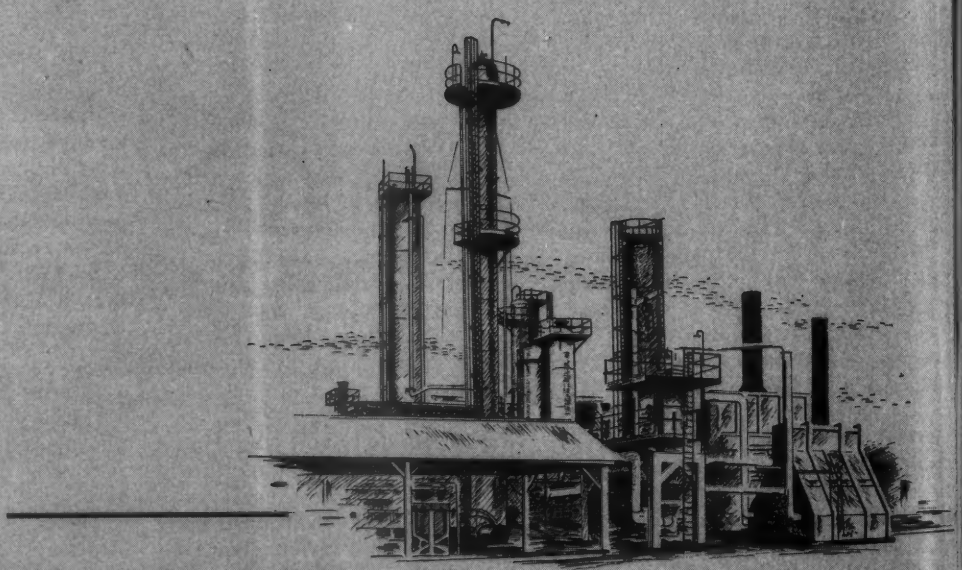
California Attorney General Brown announced here that he has recommended to Governor Warren and the California Legislature the opening of a permanent office in Washington and has designated Assistant Attorney General Matoon the head temporarily of the national capital branch of the California Department of Justice.

---

Interior Secretary Chapman has set up a committee of oil company officials to plan and prepare for possible emergency world wide reorganization of American petroleum facilities. The action was seen as stressing the threat the U. S. Government visualizes in the western world's oil supply and distribution systems from the trouble in Iran.

# UOP PLATFORMING UNIT for . . .



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# Experiences in Dampening Pulsations In Compressor Piping Systems

By MARION L. ARNOLD
Senior Engineer
Exploitation Department
Richfield Oil Corporation

It is probably unnecessary to remind a group such as yours of the possible ill effects of pulsative flow in compressor station piping. But, for the record, they may be summarized as follows:

1. Fatigue failure of piping and heat exchanger tubes.
2. Erroneous measurement of gas streams entering and leaving the station.
3. Reduction in volumetric capacity of compressor cylinders.
4. Increase in horsepower requirement per unit volume of gas pumped.
5. Increased cost per brake horsepower of installed capacity.

The list is formidable and warrants your serious consideration of the phenomenon of pulsative flow, and what it is, why it occurs in compressor station piping, and what measures may be taken to eliminate it, or to at least mitigate its ill effects.

In retrospect, it seems that for most of the twenty-eight years I have spent in the natural gas industry, my life has been plagued by problems attributable to pulsative flow. The phenomenon usually evidences itself by the vibrations it sets up in piping. I can recall that, as a member of a labor gang, we spent a considerable portion of our time in bracing and tying down piping in an endeavor to stop it from shaking.

After two or three years in the Construction and Operating departments I was transferred to gas measurement work. The transfer came at the time the gas lift method of producing oil wells was coming into general use in the Signal Hill Field of California. The compressors used for this purpose were of about 100 brake horsepower capacity, steam driven, and operated at about 250 rpm. They compressed gas from the vicinity of 30 psig to about 500 psig. It was very disheartening to us in the Measurement Department to find that, as often as not, the gas meters we so carefully installed to measure the output of these plants

M. L. Arnold

showed that gas was flowing to them through the compressor discharge line and leaving through the suction line. We suspected then, and now know, that this startling misinformation was one of the effects of pulsative flow in the gas line. Gas measurement being what it was, we of course had no inkling of the effects pulsative flow might be having upon the capacity of the compressor cylinders, or upon the power required to compress the gas.

But these past troubles paled into insignificance when, in 1941, we started our North Coles Levee gas injection plant. This plant consisted of six 600-horsepower, two-cycle, direct connected, right angle, gas engine driven compressors. Each unit had six power cylinders and three compressor cylinders. Gas was compressed from 400 psig to 3400 psig in two stages. Two compressor cylinders on each engine were used on the first stage, and one on the second stage. The plant had been, we thought, carefully engineered and designed, but when it was placed in operation very heavy vibrations developed in the double expansion U bends, which had been used to absorb movements due to thermal expansion and contraction of the piping.

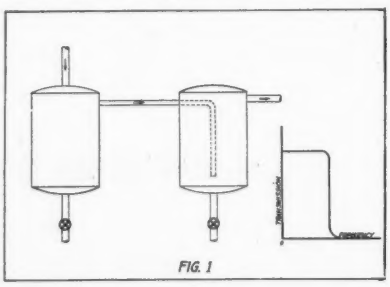

FIG. 1

The seriousness of the situation caused me to make a very hasty, but fairly comprehensive investigation into the causes and effects of vibration, and means for controlling it. By applying some of the information acquired, we were able to reduce the amplitude of vibration to, what were believed, safe limits, largely through the installation of spring-type vibration dampeners on the piping. The findings made in this investigation were reported in a paper presented to a joint meeting of the California Natural Gasoline Association, and the Southern California Section of the American Society of Mechanical Engineers in December 1944.[1]

Even though, as stated previously, we were reasonably certain that the amplitude of the movements of the piping was being controlled within safe limits, we could not be certain that this was the case. We were, therefore, anxious to accurately determine the causes of the vibrations and eliminate them, if possible. In 1945 the engineering firm, which had designed and constructed the plant, informed us they had completed development of a device which they believed would eliminate our trouble, if the cause of the vibration were pulsative flow. Neither they nor we knew, however, whether the vibrations were the result of the pulsative flow of gas, or of mechanically transmitted forces originating from the reciprocating parts of the engines, or a combination of the two. We, therefore, decided to

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make a joint survey of the plant for the purpose of determining this. Before describing the methods employed in the survey, or describing the corrective measures proposed if the cause were found to be pulsative flow, a very brief discussion of the phenomena occuring in the compressor piping will be given.

It is well known that gas does not flow from a compressor cylinder in a continuous steady stream. It emerges in, what Murphy[4] has described as "puffs." The magnitude and duration of these "puffs" is a function of the cylinder size and clearance, and the compression ratio. The frequency of the puffs is a function of the compressor speed in revolutions per second, and is twice as great for a double-acting cylinder as for a single-acting cylinder.

When these puffs of gas are emitted into the discharge piping they compress the gas in the immediate vicinity of the compressor discharge valves and cause flow in the line away from the cylinder. The velocity of flow varies and is a function of the instantaneous rates at which the puffs are emitted, and the cross-sectional area of the pipe. This also originates a compression, or pressure wave which travels through the pipe at the velocity of sound in the gas. This pressure wave may be reflected and travel back along the pipe in a direction opposite to the gas flow.

The frequency at which the puffs are emitted is a function of the compressor speed in revolutions per second, and further depends upon whether the cylinder is operating single-acting or double-acting. If two or more cylinders use a common line, the frequency of the puffs is also a function of the crank angles between the various cylinders and the numbers of cylinders.

If two compressors are discharging into a header, the frequency of the puffs may or may not be the same as for one compressor. If both of the compressors are identical and the cranks are all in phase, then the frequency will be the same as for one compressor. If the cranks are 90 degrees out of phase, the frequency will be doubled. If the cranks are alternately in phase, then out of phase, a variation in frequencies occurs which is known as a "beat frequency." Obviously, the more compressors, the more possible frequencies exist. The puffs taken into the cylinder cause a rarefaction which creates similar disturbances in the suction line. In both cases, the frequency of the pressure waves generated is the same as the frequancy at which the puffs are emitted into, or withdrawn from, the line or system.

It is evident from the foregoing discussion that two phenomena exist in the compressor piping. These are:

1. A pulsative flow of gas away from the cylinder in the discharge line and towards the cylinder in the suction line.
2. Pressure waves which may be traveling in both directions iin both lines.

Both these effects may be detrimental to good compressor operation. In our case the immediate concern was with piping vibration. Concerning this Murphy[4] has stated that, ". . . serious vibration of the piping, if present, usually occurs at a relatively unsupported bend far from the compressor. Such a bend may behave as a Bourdon tube pressure gage, and it must change the momentum of the gas. Its frequency as a mechanical vibrating system may chance to coincide with the acoustical frequency and thus aggravate the difficulty. Essentially this states that the pulsative flow of gas, rather than pressure waves, is responsible for piping vibrations. We held the same opinion. Had we considered that pressure waves were responsible, we would have been less reluctant to accept the proposal which had been made to cure the vibrations.

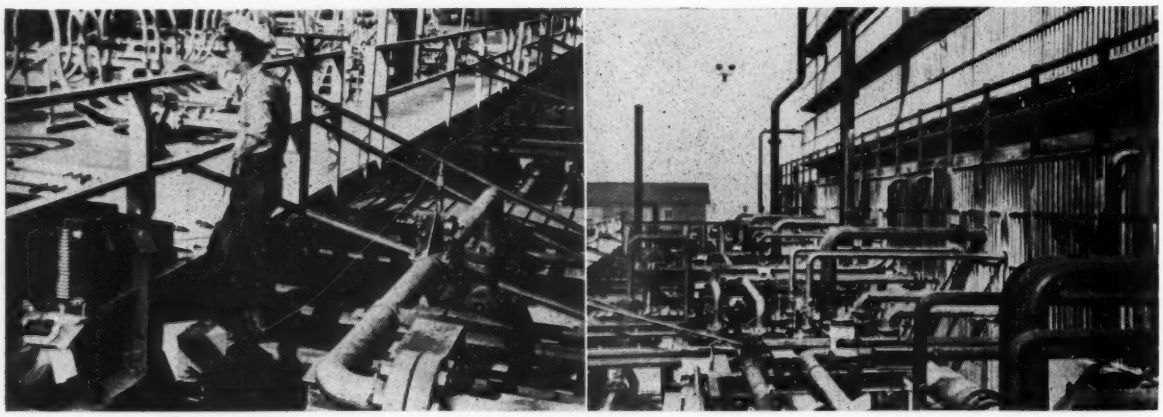
Acoustical filters have long been used to suppress the pressure waves (sound) created by the air intake and the exhaust of gas engines. But to the best of our knowledge, such a filter had not been used to suppress the effects of pulsative flow—yet that was the remedy suggested by the contractor. The filter proposed consisted of two volume chambers connected by a length of tubing of smaller diameter. The gas was to flow through the three elements in series. It is shown diagrammatically in Figure 1, and has been described by Stephens[2].

The relationship between the size of the volume chambers (V), the length (L), and radius (R), of the interconnecting tube, and the cut-off frequency (F) of the device is expressed by Stephens as follows:

$$\frac{L}{R^2} \times V = \frac{C^2}{78.674F^2}$$

in which,

L = the length in inches of the passage in pipe.



Station "A" Figure 2 Station "B"

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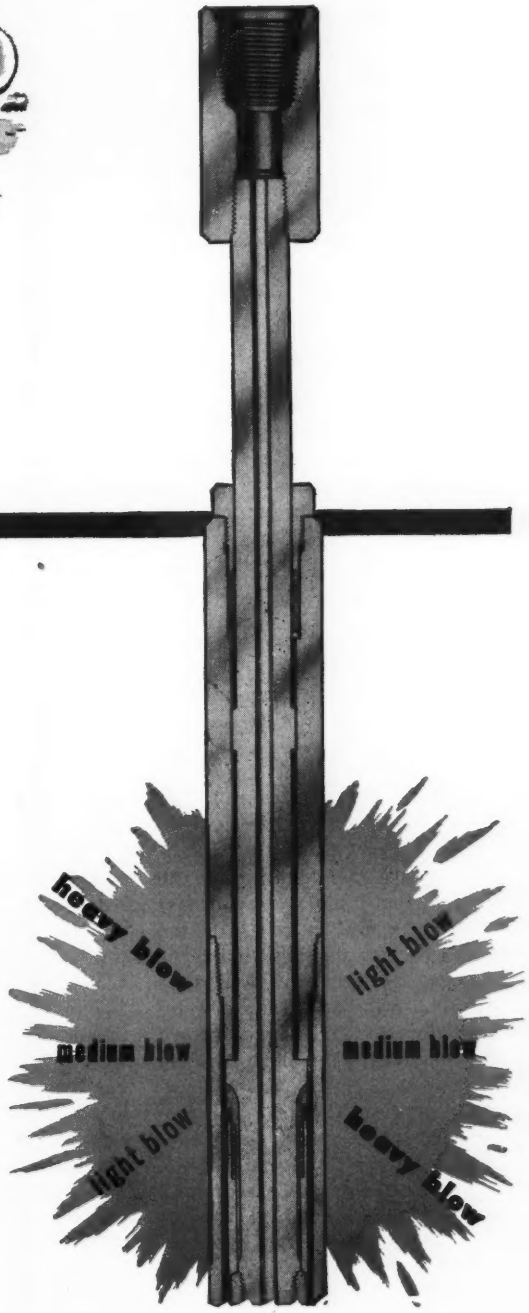


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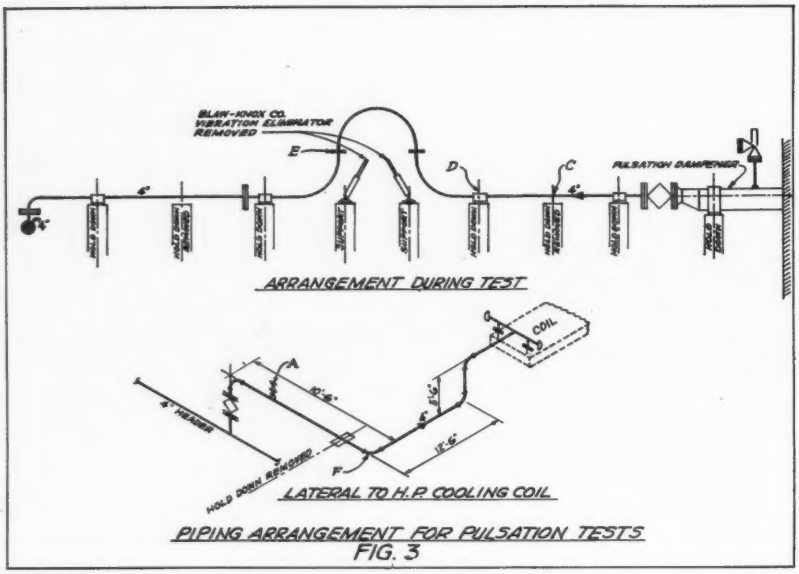


FIG. 3

R = radius in inches of that passage.

V = the volume in cubic inches of one of the equal volume chambers.

C = net velocity as defined below, in feet per minute of sound in the gas, and of the gas stream in pipe.

F = fundamental frequency per second of pulsations created in the gas line by the compressor and at the compressor outlet.

This and one other type of acoustical filter are discussed by Hirschorn[3], who presents similar equations.

It was reasoned that a pinched valve in the compressor discharge line would be the rough equivalent of the $\frac{L}{R^2}$ term, and that the compressor surge bottle upstream of the valve, and the lateral downstream of the valve, would approximate the chambers (V) to a sufficient degree to allow us to determine whether our trouble was indeed caused by pulsative flow and could be corrected by the installation of the proposed device.

Before making the test, all mechanical vibration dampeners were removed from the piping and observations made of the acceleration and deflection of the piping at various points. A recording was made of the pulsations occuring in the discharge headers of both stages. General views of the piping and the location of the points at which these recordings were made can be seen in Figures 2 and 3.

Then the shut-off valves in the 3400 psig discharge lines were pinched sufficiently to create a 220 psig pressure drop, and the corresponding valves in the 1250 psig discharge lines throttled to create a drop of 120 psig. After throttling it was found that the acceleration of the piping had been reduced to from 18 to 46 percent of its original values, and that the displacements had been reduced to from 10 to 38 percent. The results are tabulated in Table I.

TABLE I

| Station | Acceleration % of Original | Displacement % of Original |
|---|---|---|
| C | 46 | 19 |
| D | 32 | 38 |
| E | 23 | 10 |
| F | 18 | 12 |

The charts in Figure 4 show the change in pulsations in the 3400 psig header, and those in Figure 5 show the corresponding changes in the 1250 psig header.

These results indicated to us that the devices would be effective, and we contracted for their installation. Figures 6 and 7 show the pulsations in the headers after the change. The recordings were made at the same points are shown in Figures 4 and 5. The pressure drops through the dampeners were approximately 10 percent of the pressure drops which had been required across the pinched valves. The results were entirely satisfactory. However, we later decided to rotate the vertical expansion loops in the laterals to the horizontal position to eliminate a small amount of vibration believed to be due to mechanically transmitted distrubing forces originating from acceleration of the reciprocating part of the engines.

Our next application of pulsation dampeners was made solely for the purpose of improving the gas measurement at a Natural Gasoline Plant. This plant was served by five horizontal, 250 BHP compressors, each operating at 200 rpm and each equipped with two double-acting compressor cylinders. The gas was boosted in two stages from an inlet pressure of 15 psig to a final discharge pressure of 450 psig. The intake meter was approximately 100 feet distant from the point of connection of the field line to the compressor suction header. In order to obtain a readable chart it was necessary to place a restricting orifice in the manometer tube. The resultant reading, however, could not be made to agree with the sum of the field meters. Pulsations from the discharge side of the compressors had a similar bad effect upon some of the plant process meters.

There are several ways in which pulsative flow may effect orifice meters. If the frequency of the pulses approximates the natural frequency of the manometer, the mercury may be forced into violent oscillations. The natural frequency of most mercury manometers is low enough to avoid this. The pulse frequency is given by the following formula:

$$\frac{360°}{C.A.} \times \frac{RPM}{60} = \text{Frequency}$$

C.A. = Maximum crank angle between compressor cylinders, including apparent crank angle of each cylinder, which is:

Single-Acting — 360°

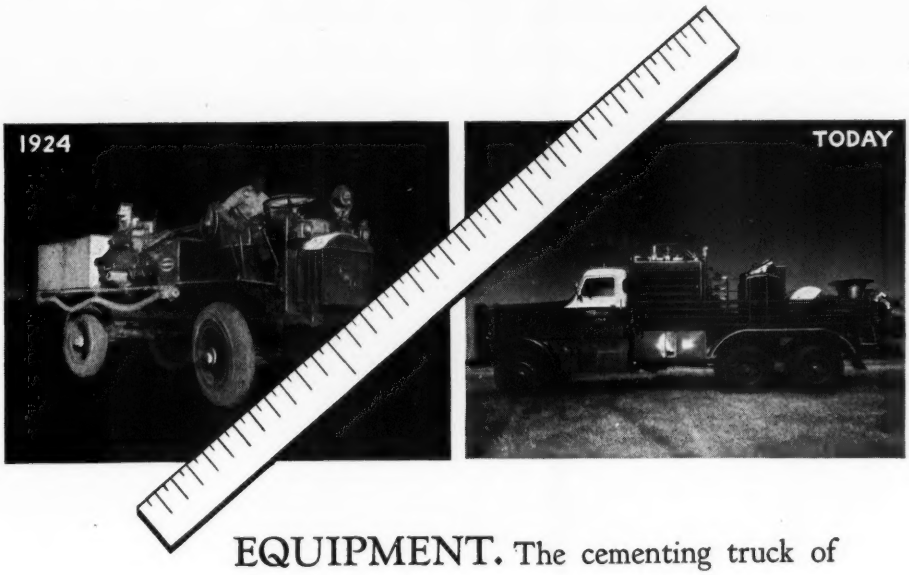
Double-Acting — 180°

Frequency=pulses per second.

However, even if the disturbance is small, it may have a serious effect upon measurement if the frequency of the oscillation is in resonance with the recording system, or some component of it, such as the pen and pen arm.

Another effect may be caused by the manifold, meter piping, and meter pots. Reference to Figure 1

# BY ANY YARDSTICK... CEMENTING PRICES ARE LOW

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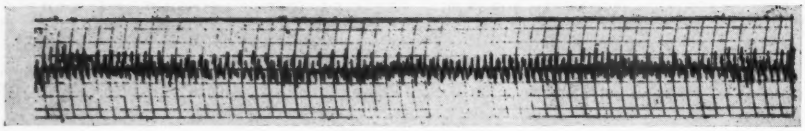

Figure 4 "A"

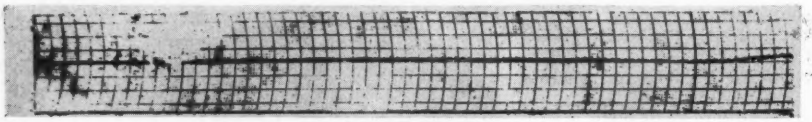

Figure 4 "B"

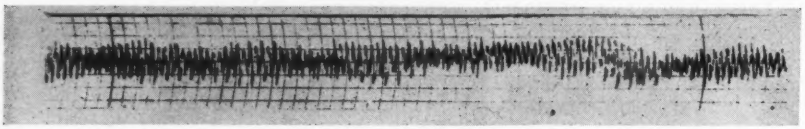

Figure 5 "A"

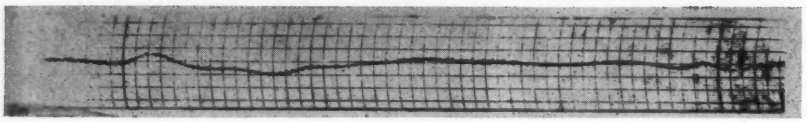

Figure 5 "B"

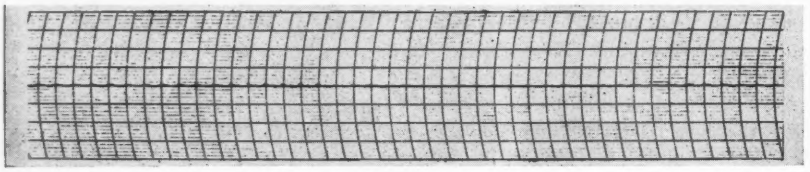

Figure 6

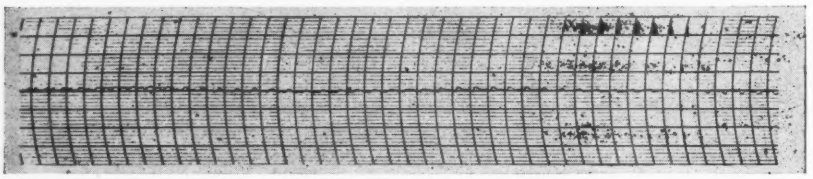

Figure 7

brings out the similarity of orifice meter piping to a pulsation dampener. The meter manifold upstream of the orifice represents one volume chamber, the upstream meter pot represents the other. The meter piping, which is usually of small diameter, represents the connecting tube. A similar construction exists downstream of the orifice. These, as explained before, constitute low pass acoustical filters. If they are not identical, the pressure waves acting on the mercury in one pot will differ from those acting on the mercury in the other pot, and serious errors in measurement may result.

In our case, the installation of a single pulsation dampener in the field line between the meter and the suction header cured the difficulty. A similar installation made in the plant discharge line stopped the interference with the plant process meters.

Both the users and the manufacturers of compressors have long been concerned with designing compressor piping to give optimum compressor performance. Thiel[5] has proposed a method for sizing suction and discharge laterals. One compressor manufacturer, upon request, furnishes its customers with a manual for sizing headers, laterals, and cylinder surge chambers. Both of these treatises are concerned with minimizing pressure loss due to gas flow. Neither considers the possible ill effects of pressure waves. Probably the most complete treatment of this subject is contained in the doctoral thesis prepared by Dr. Eugene Murphy[4]. In his introduction he states:

"Sometimes the compressor delivers more gas than expected but at the expense of more than proportionally increased power requirements, possibly exceeding the capacity of the installed motor. More often the rate of gas delivery falls below that guaranteed by the builder, although the amount of energy required per unit of gas actually delivered may again be above that normally expected for the pressure conditions measured in the lines far from the compressor.

"In perhaps the most disturbing cases, the power requirements fluctuate, causing 'hunting' or rapid variations in speed which the prime mover governor cannot control. Similarly, there may be sharp variations in current (and line voltage) in the case of synchronous electrical motors driving compressors. Internal combustion engines sometimes show similar deviations from designed power output, increased fuel consumption and exhaust gas temperature, and occasionally periodic variations in speed.

"These difficulties are believed to be due to resonance between the fundamental or a harmonic of the pressure wave set up by the intermittent intake or discharge of gas and the natural frequency of all or a part of the gas piping system. Initial difficulties in the cases considered are due to vibration of the gas as in a complicated system of organ pipes."

Murphy has developed a method by which the natural frequency of vibration of even the most complicated system of piping may be determined. The system is broken up into "lumps" of pipe. The length of the lump is from 1/10 to 1/20 of the wave length for the suspected natural frequency. Through the use of electrical analogues and scale factors, the natural frequency of the piping system is then computed on a network calculator. If this is done during the design stage, and the system is found to be in resonance with the fundamental frequency of the compressor cylinders, or an important harmonic thereof, design can be changed to avoid this.

From Murphy's work it can be

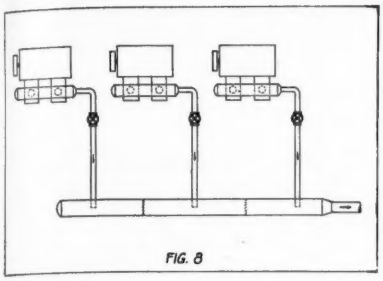

FIG. 8

concluded that orifice plates and the resistance of the piping has little effect on the natural frequency of a piping system. Surge chambers, however, have a very pronounced effect in lowering the natural frequency. Some of Murphy's results compared with Voissel's results on a single cylinder compressor are shown in Table II, in support of this.

**Table II**

**Comparison of Voissel's Experimental Resonant Frequencies with Those Observed on Analogous Circuits upon the Network Calculator.**

| | Voissel Experimental (RPM) | Equivalent Circuit on Calculator (RPM) |
|---|---|---|
| I Plain Pipe, 22.5 meters | 260 | 260 |
| II Plain Pipe, 26.0 meters | 220 | 222 |
| III Plain Pipe, 24.6 meters | 218 | 222 |
| IV Plain Pipe, 24.6 meters, sharper elbow | 210 | 219-222 |
| V No suction valve; plain pipe, 24.6 meters, sharp elbow as in No. IV | 217 | (219-222) |
| VIII Surge chamber 2.88 meters from compressor, total 24.6 meters of pipe | 170 | 172-173 |
| IX Surge chamber 7.42 meters from compressor, total 24.6 meters of pipe | 17[illegible] | 180-182 |

Concerning the use of surge chambers he states,

"When resonance occurs in practical systems, the owners or designers usually feel that a larger surge chamber (or manifold in the case of multiple cylinders) is needed. The supposition is that no resonance would take place if the pipe between the cylinder and the entire atmosphere were negligibly short, so that puffs of gas would immediately dissipate in the atmosphere. The addition of a fairly large surge chamber near the cylinder is thought to approach the desired effect. The flow in the secondary pipe beyond the surge chamber is assumed to be smooth and substantially non-oscillating.

"The experiments by Voissel and Farmer and the analogous electrical studies here reported as well as the studies on generalized systems, reported below, indicate that such a simple picture may be misleading. Surge chambers should be added or increased in size only with the knowledge of the existing natural frequency of the entire piping system.

"Misguided addition of surge chamber volume might merely lower the natural frequency from a value somewhat above resonance with the important harmonic of the compressor speed to substantially that harmonic. Then the total pulsation of the gas would be increased from a substantial forced oscillation to a more severe resonant vibration."

He also comments on the use of filters as follows:

"The analogy might be used to design acoustical filters or mufflers designed to pass the direct flow with minimum pressure drop, and yet to reduce (attenuate) the oscillating components over a reasonable range of compressor or engine speeds. The aim would be to use minimum resistance but properly proportioned inductances and capacitances. Any proposed design of filter could be checked in analogous electrical form. The extensive information on electrical filters (chiefly for telephone and radio service) could be transformed into acoustical terms. Unless such a filter is contemplated, however, the frequent practice of designing surge chambers in a certain ratio to the volume of the cylinders without regard to the remainder of the piping seems hazardous."

I will conclude this discussion with a very brief description of the piping in our latest plant. In this plant one of the volume chambers of the pulsation dampener is used as the surge chamber, at each unit. The other volume chambers are laid end-to-end and, separated by orifices, they comprise the header. The tube connecting the volume chamber located in the header with the volume chamber at the compressor thus becomes the compressor lateral. This arrangement has also been described by Stephens[7]. It is shown diagrammatically in Figure 8. A photograph of the piping is shown in Figure 9. Note the absence of expansion bends. Suitable provision for lateral and longitudinal movement of the piping makes their use unnecessary.

We have not actually checked the performance of the compressors using pulsation dampeners, or the dampening system, by means of in-

*(Continued on Page 24)*

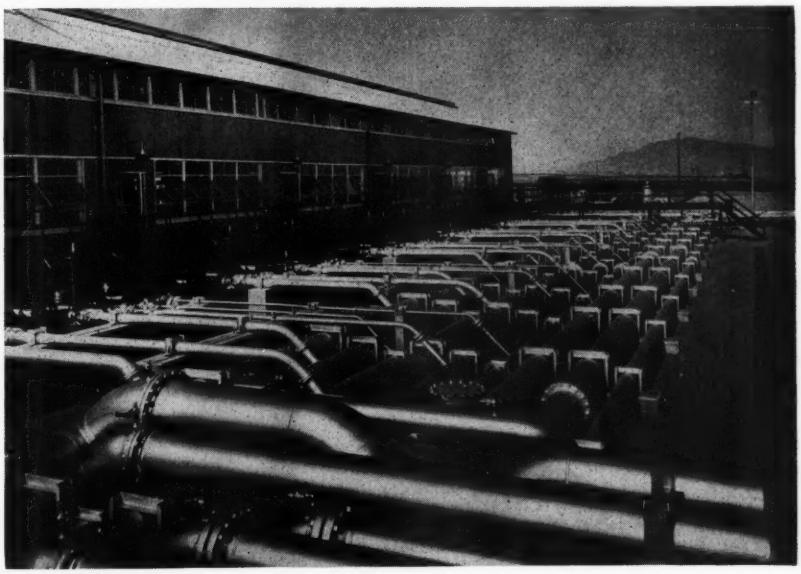

**Figure 9**

# JOB-TAILORED* Cements

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# A New Fishing Technique

By R. R. RIEKE,
Schlumberger Well Surveying Corp.

A new fishing technique has been developed to recover wire line and electrical surveying equipment lost in the open hole of a drilling well. Its use has materially reduced fishing costs in such cases, has eliminated more costly fishing jobs, and has resulted in a high percentage of recovery. This new fishing method has found particular adaptability in those areas where directional holes are drilled, and in those areas of unconsolidated formations with long shale sections. In 11 cases out of 12 such fishing jobs in recent months, the fish has been completely recovered by this new technique.

The principal difference in the new fishing technique over previous practices lies in the manner of guiding the fishing shoe down to the fish. Instead of running the drill pipe containing the fishing shoe alongside the wire line or cable attached to the stuck instrument, the latest technique requires that the cable be cut above the rotary table and threaded through the fishing shoe and drill pipe. Equipment and procedures for accomplishing these jobs have been designed and successfully proven in practical use.

Many of the difficult fishing jobs involving wire line devices have resulted from keyseating the cable in the formation at bends, or shoulders in the hole. That keyseating does occur and cause fishing jobs of this type is well illustrated by Figure 1. This is a piece of hard bentonitic sandstone containing a deep groove worn by the cable. It was found lodged around the cable just above a survey instrument when the latter was brought out of the hole during a normal operation. Fortunately, the piece was dislodged without trouble in this instance. When increased tension is applied to the cable in cases of this nature, there is danger of breaking the cable at some point between the fish and the keyseat, thereby leaving much of the cable in the open hole and resulting in a very difficult fishing job.

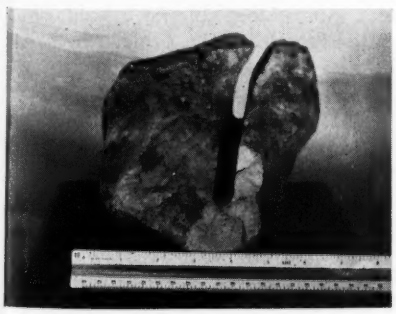

Figure 1

One common practice of recovering wire line and instruments employs a slotted overshot with a cable guide in which the pipe is lowered alongside the cable in the hole. This practice has several disadvantages. Instances have occurred wherein the cable, removed from the keyseats by the cable guide, pulled back into the keyseat behind the guide and remained stuck. In some cases, due to inadvertent rotation of the drill pipe while going into the hole, the cable has been fouled or broken off. Another danger in this method lies in pinching off the cable by the tool joints pressing against shoulders or casing shoes. The technique of threading the cable and retaining it within the drill pipe effectively eliminates these disadvantages.

Details of employing this new fishing technique are relatively simple. Cable stuck in the hole is first supported by a special clamp with a tee-shaped hanger resting on the rotary table as shown in Figure 2. The cable is then cut above the rotary and threaded through the drill pipe. A spear adapter is fastened by means of a rope socket to the end of the stuck cable above the rotary, and a modified overshot fastened to the sand line. These

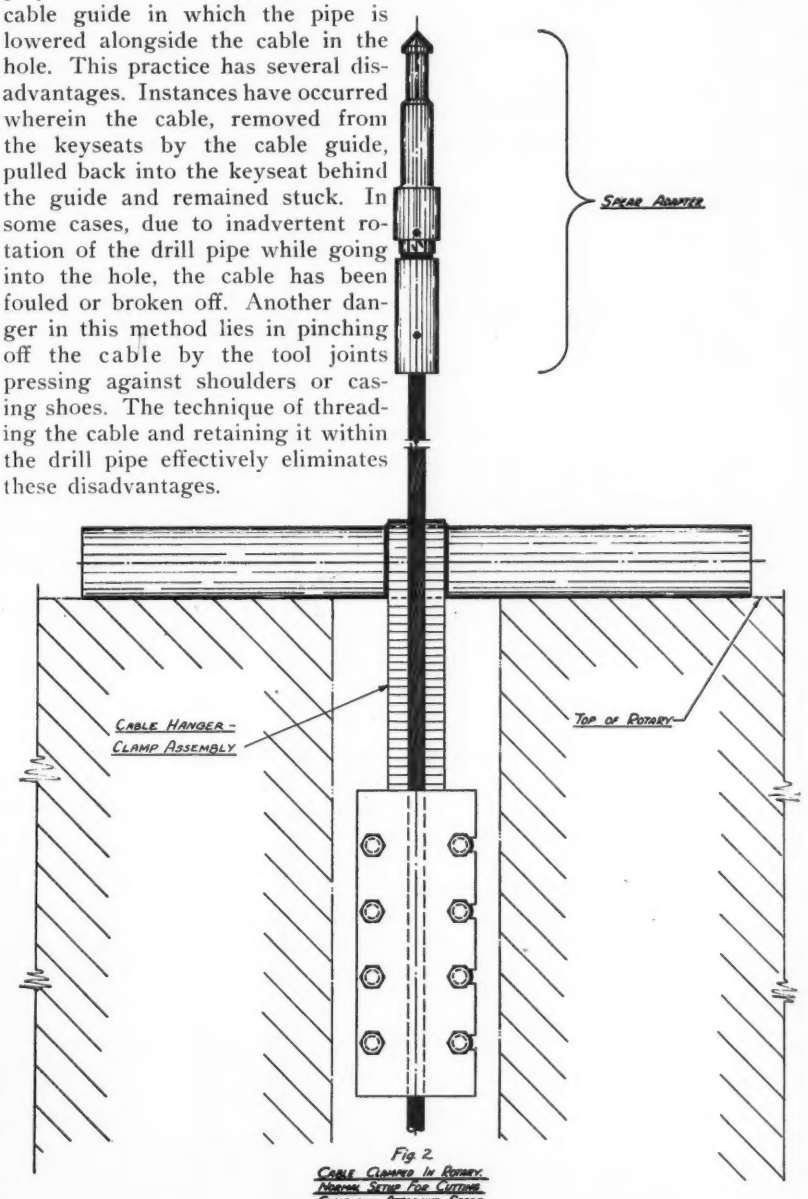


Fig. 2
Cable Clamped in Rotary. Normal Setup for Cutting Cable and Attaching Spear Adapter.

features are illustrated in Figures 2 and 3. Should no sandline be available, the cable remaining on the survey winch truck may be substituted. The sand line is passed over the instrument sheave suspended from the crown block. Tension control is maintained through use of a regular tension measuring device on the survey truck.

A single bowl overshot is used on the drill pipe for retrieving the instrument. This overshot is built with sufficient inside diameter to accommodate passage of the spear and the overshot which has been attached to the sand line.

When the first stand of drill pipe is picked up and the retrieving overshot coupled to it, the sand line is threaded through it and coupled to the spear adapter on the cable in the well. The weight of this cable is then supported by the sand line and the tee-clamp supporting it during the cutting operation is removed. The first stand can then be lowered in the hole and set in the pipe slips. To support the cable in the hole while the sand line is released and threaded through the next and succeeding stands, a special C-washer is placed around the cable on top of the pipe in the hole, and the spear adapter is lowered to rest upon it as shown in Figure 2.

When it is necessary to circulate mud during the operation, a special circulating sub is installed between the kelly and drill pipe. This sub is equipped with a bushing insert that will support the cable during the circulation of fluid through it.

Contact with the fish will, of course, be indicated by a sharp decrease on the weight indicator. Whether or not the fish is engaged may easily be determined by pulling up one or two joints and attempting to pull the cable up a corresponding distance without increasing the tension. If the tension does not increase appreciably, the fish is free; if tension does increase, the fish is still stuck.

The next step in the fishing operation is to break off the cable at the connection to the device, which connection is purposely made to be the weakest point. This breaking off is easily accomplished by breaking out a couple of joints of drill pipe and passing the slack cable thus obtained around a sheave suspended from the traveling block. When the cable has been broken free from the device, it may be reeled from the hole onto the winch truck, and the pipe may be pulled to remove the survey instrument.

The practicability of this new method can best be illustrated by actual cases. In a recent Texas Gulf Coast well, a side-wall coring device was stuck at a depth of 8600 feet. The hole had three whipstock settings that deviated it from the vertical as much as 14 degrees. Stretch curves on the cable indicated it to be held in a keyseat at approximately 3500 feet. The new method resulted in complete recovery. Had an attempt been made to pull off at the top of the sample taker, it was quite likely that some 5000 feet of cable would have been lost in the hole.

In a West Texas well, an attempt was made by the drillers to run open end pipe alongside the cable. This failed to release the cable, which by stretch curves, was shown to be keyseated at about 2000 feet. After this attempt failed, the new technique was followed and all equipment was removed undamaged.

Tools such as these have been assembled in complete kits with adapters to fit the various drill pipe and tubing sizes so that fishing operations may be carried out efficiently with a minimum loss of time.

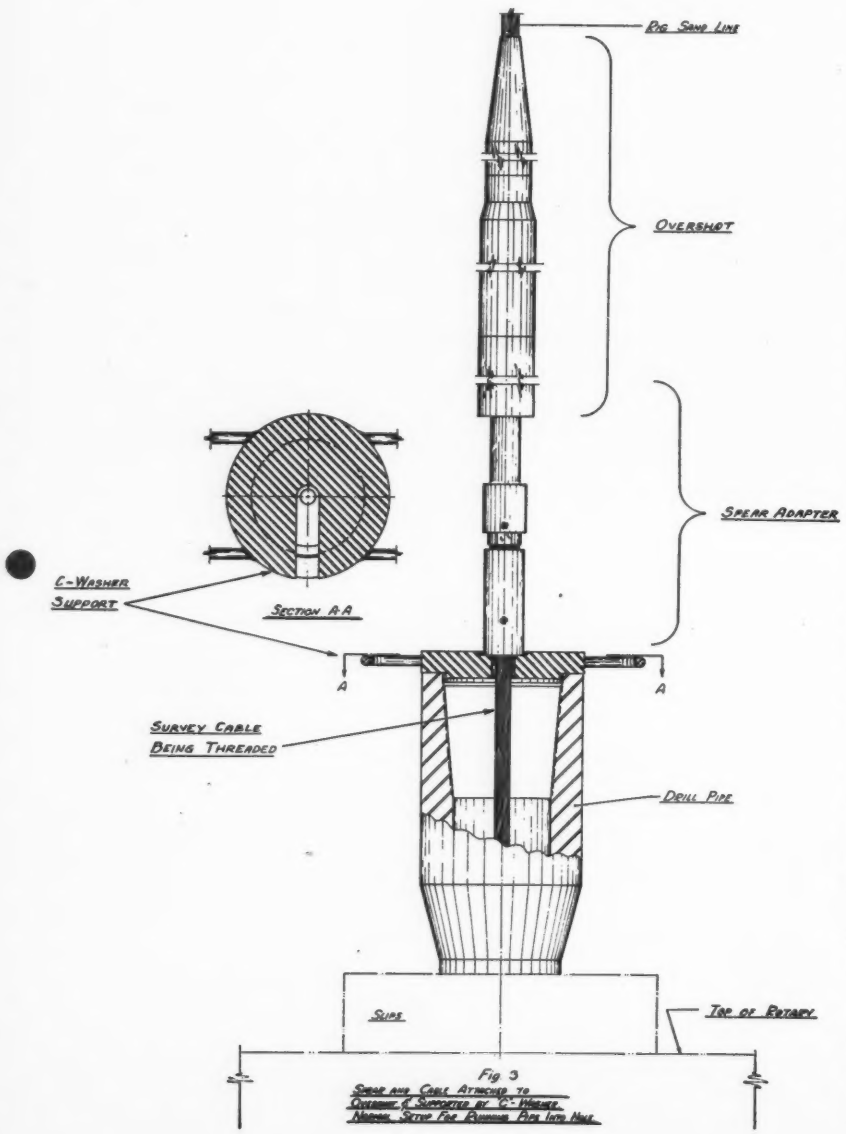


Fig 3
Spear and Cable Attached to Overshot & Supported by C-Washer Ready to Set for Running Pipe into Hole

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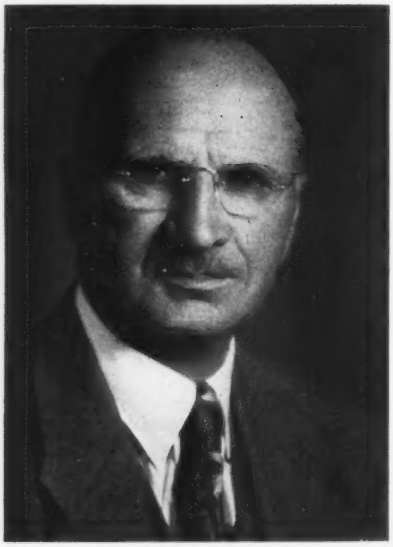
# Personalities IN THE NEWS

## McLaren Heads C.N.G.A.

The Board of Directors of the California Natural Gasoline Association, at its annual meeting at the Jonathan Club, named Geo. C. McLaren, General Superintendent of Southern District Natural Gasoline Department, Standard Oil Company of California, to the presidency and Warren H. Kraft, Director of Honolulu Oil Corporation to the vice-presidency of the organization. E. R. Millett, Jr., was reappointed as secretary-treasurer.



Geo C. McLaren

Outgoing president R. S. Tulin, Shell Oil Company, presided over the business session and announced the results of the annual election of officers for the fiscal year of 1951-1952.

In addition to the past presidents who are ex-officio members, the following were appointed to serve on the executive committee: F. E. Bradley, C.C.M.O.; C. L. Case, Continental Oil Company; R. C. Enderly, Wilmington Gasoline Company; Fred Hartley, Union Oil Co. of California; Ray Hull, California Research Corporation; C. L. Hutchings, Tide Water Associated Oil Company; E. W. Walker, Western Gulf Oil Company; P. E. Foote, Petrolane, Ltd.;M. L. Fort, Pacific Lighting Gas Supply Company; Grove Lawrence, Southern California Gas Company and Winton J. Heinz, Ingersoll-Rand Company.

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## Schlumberger Announces Executives Changes

W. J. Gillingham has been appointed Executive Vice President of the Schlumberger Well Surveying Corp., effective July 1, 1951, Pierre Schlumberger, President, has announced. He will replace Roger Henquet, who recently resigned from the organization. Concurrent with Gillingham's appointment, Mr. Schlumberger also has announced other organizational changes.

A. Vennema has been promoted to the newly created position of Vice President in charge of Personnel Relations. A. Claudet will replace Gillingham in Caracas, Venezuela, where he has been appointed Vice President and General Manager of the Schlumberger companies operating in South America. Charles Doh is being transferred from Illinois to New Orleans, where he will replace A. Claudet as manager of the Southeast Area. Allen Morazzani has been promoted to the position of manager of the Northeast Area (Illinois, Kentucky, Michigan and Appalachian region), in turn, replacing Charles Doh.

W. J. Gillingham

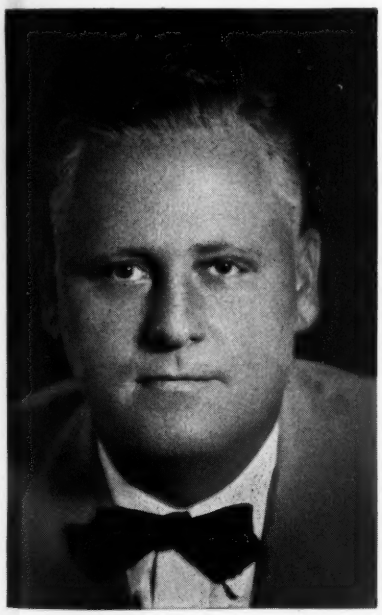
A. Claudet

Gillingham is widely known in oil circles in the United States. He has been affiliated with the Schlumberger companies since 1934, and has worked in many regions of the United States, including Louisiana, Pennsylvania and West Texas. He was manager of the Louisiana Division before being transferred to Caracas, Venezuela, in 1947 as Vice President and General Manager of the Latin American Schlumberger companies. His responsibilities there included supervision of operations in Mexico, Venezuela, Columbia, Ecuador, Peru, Trinidad, Brazil and Chile.

Vennema, a graduate of the University of Michigan, has worked for the Schlumberger Corporation since 1937. He started as an engineer and except for the war period, which he spent overseas as a colonel in the armed forces, has seen service in various parts of the Gulf Coast. He became Personnel Director in 1948.

Claudet has also been a member of the Schlumberger group for many years, having started with the French Company in 1930. He has held various responsible positions with the company in all parts of the world. Most recently he has been manager of the Schlumberger Southeast Area.

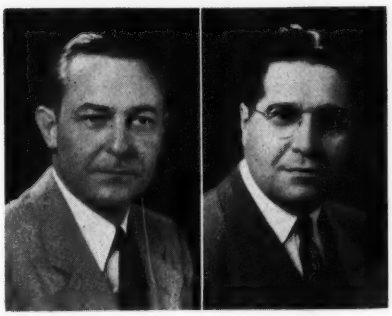
Doh and Morazzani are also old members of the organization. Both came to the United States in 1937 after service in other parts of the world. Doh has worked primarily in East Texas and in Illinois, where he became Area Manager in 1945. Morazzani has worked on the Texas Gulf Coast and Illinois, before becoming manager of the West Texas Division.



**Jas. D. Hughes, general sales manager of Lane-Wells Company has been elected a director of Lane-Wells Company to fill a vacancy on the board, according to Walter T. Wells, chairman. Mr. Hughes has been associated with Lane-Wells Company since 1939 and was Gulf Coast division sales manager of the company in Houston from 1941 to 1945 when he was transferred to Los Angeles as manager of oil field sales. Early in 1945 he was made sales manager and in 1950 became general sales manager.**

## Wiley and Weingard Advance At American Meter Co.

Donald C. Wiley has been appointed Vice President in Charge of Research of American Meter Company, makers of precision instruments for the measurement and control of gas, air, steam, oil, and other fluids.



**Wiley** **Weingard**

Mr. Wiley was graduated from Purdue University in 1931. From 1931 to 1947 he was employed by John J. Nesbitt, Inc., of Philadelphia. Six years of this time were spent as Production Manager.

Mr. Wiley became associated with American Meter Company in 1947 where he supervised the expanding activities of the main research laboratory in Erie, Pennsylvania.

The American Meter Company has also announced the appointment of Archie E. Weingard as Vice President in Charge of Production.

Mr. Weingard became associated with the American Meter Company in 1947 as Supervisor of Methods. He studied and recommended procedures and methods for more efficient operational programming in the various plants. His responsibilities included production, methods, planning, and scheduling, as well as the supervision and setting up of advanced systems and manufacturing procedures.

Mr. Weingard is a graduate of the General Electric Technical Engineering School, where he studied engineering, designing, management and analytic subjects. Following graduation he spent sixteen years at General Electric serving as Foreman of a General Machine Department, Chief Planner and Tool Planner, Supervisor of Railway Control Planning and Wage Payment Division. During this period he conducted evening classes in tool designing at the Pennsylvania College Extension in Erie. From 1943 to 1947 he was Superintendent of Production Control at Lord Manufacturing Company.

Mr. Weingard is a native of Erie County, Pennsylvania, and has spent most of his life in that vicinity. He is active in civic affairs, church and lodge work, and has been an active member of the local chapter of the American Society of Tool Engineers, serving as chairman of that organization during the 1949-1950 term.

---

Henry M. Kilian, chief geologist for Oil Properties Consultants of Los Angeles, was the principal speaker at the meeting of the American Institute of Mining and Metallurgical Engineers, junior petroleum group, at the Rio Hondo Country Club, Downey.

**Dean Hoffman has been appointed Los Angeles District Superintendent for the Lane-Wells Company. He is taking over the post, at the Paramount, California District Office, vacated by James F. Alexander who has been recalled to military duty. Hoffman has become well known to California oil men in the past 7 years. He started with Lane-Wells, upon his release from the Coast Guard, in 1944, and made many friends in the industry as Rigman, Electrolog Operator, Sales Engineer, and Ventura Station Superintendent before gaining his present position. Hoffman will superwise Sales and Operations in the Los Angeles area.**

**Carl H. Leidecker will take over the position of Ventura Truck Station Superintendent vacated by Hoffman. Leidecker has been with Lane-Wells for 5 years. Starting as loader, he became hoistman and then an Electrolog Operator at Ventura, California.**

**A. R. BOOKER APPOINTED EXECT. V. P. AND G. M. OF ELECTROFILM CORP.**

**A. R. Booker, well known in sales and marketing circles, has been appointed Executive Vice-President and General Manager of Electrofilm Corp., it was announced by J. E. Droege, Chairman of the Corporation's Board of Directors. Booker, who will head all phases of the Electrofilm Corp., succeeds W. G. Andrews, who resigned recently.**

Darrel L. (Kirk) Kirkpatrick, formerly district geologist for CCMO in the San Joaquin Valley, has opened private consulting offices in Bakersfield at 725 Union avenue.

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Grant W. Corby, geologist and engineer, addressed the Philippines Society of Southern California at the Los Angeles Athletic Club. Corby recently returned from the Philippines, where he was advisor to the Government there on oil exploration and development matters on the islands.

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Former President Herbert Hoover has returned to San Francisco from New York. He refused to discuss international affairs. Mr. Hoover's son, Herbert Hoover, Jr., is the head of Union Oil Company of California's geophysical organization.

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John M. Peirce, Western Oil and Gas Association at Los Angeles, is back at his desk following a trip to Washington, D. C., where he conferred with industry leaders on tax matters.

**W. B. Curtis, public relations manager for General Petroleum Corporation (center), accepts a National Safety Council award for "exceptional service to safety" from Earl F. Campbell, council field director as Los Angeles' Mayor Fletcher Bowron looks on. The company was cited for its dramatic film about safety, "And Then There Were Four," which has been seen by over six million people in the last year. The picture, which stars James Stewart as narrator, was similarly cited by the National Council on Films for Safety. It also won first prize for safety films at the recent Boston Film Festival. "And Then There Were Four" is being distributed nationally by the Flying Red Horse Companies.**

**John Petrovich is the new Sales Engineer for the Lane-Wells Company at Bakersfield, California. Petrovich has been with Lane-Wells for over three years, having previously been a Hoistman and an Electrolog Operator in the Los Angeles district. He is no stranger to football fans. Many of you remember his exploits on the gridiron at the University of Texas and for the professional Hollywood Bears.**

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Union Oil President Reese Hale Taylor and Morris B. Pendleton, president of Plomb Tool Company, have been named to the board of directors of the Y.M.C.A. of Los Angeles.

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The Los Angeles daily press recently has been carrying news about popular oilman A. T. Jergins and his offer to bet $50,000 that if there is not a Korean cease fire order within 90 days "we will deliver the most destructive forces upon the Reds that ever have been unleashed on people." In the event of winning the bet, Jergins offered to donate the winnings to charity. The oilman not long ago sold most of his holdings for $32,000,000. He served as a Government adviser during both World Wars.

---

Tom Johnson has left the employ of the Southern California Gas Company in the San Joaquin district to take a position with Ruddy's in Visalia. Earl Ruddy is a former member of the gas company family who since 1948 has built his own appliance business.

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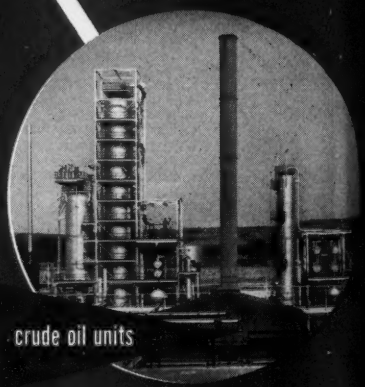
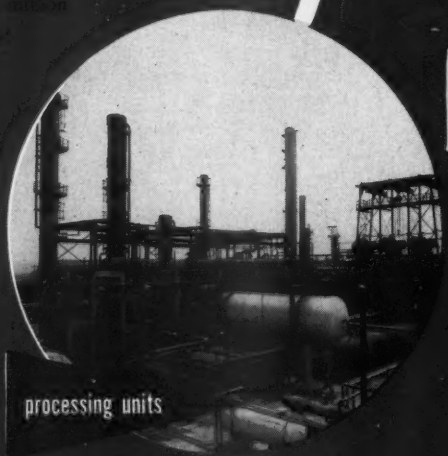


crude oil units



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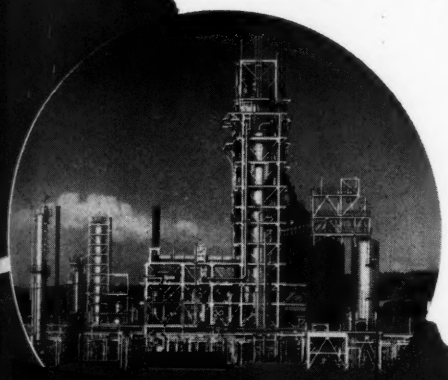

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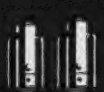

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## Top Management Changes At Republic Supply

Roy W. Johnson, former General Sales Manager for the Republic Supply Company of California, has been advanced to Executive Vice-President of that firm. His jurisdiction covers all departments of the organization throughout California.

Roy W. Johnson

Johnson is succeeded as General Sales Manager by W. Dale Russell, Senior Vice-President, who came to the company in 1917, the year in which it was founded. Through long and active service with Republic, he brings a wealth of valuable experience to his new position. He will be responsible, through the Executive Vice-President, for the development and coordination of an effective sales force; for consulting with the various departmental sales managers; for proposing an effective sales promotional campaign; for maintaining a close relationship with the Merchandising Department, so that inventories may be used most effectively; and for coordinating the activities of manufacturers' agents with the sales force.

W. Dale Russell

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Charles E. Counch, natural gas department of Standard of California at Kettleman Hills, is now serving with the Navy and at last reports was aboard the U. S. Magoffin APA 199.

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President Charles S. Jones of Richfield Oil Corp. is convinced that if the present cease-fire negotiations result in the end of hostilities in Korea, all-out oil production in California will be necessary to restore the balance with normal civilian demand. He expressed that opinion at a luncheon meeting of the Los Angeles Society of Security Analysts at the Los Angeles University Club.

---

Edward E. Adams, senior petroleum engineer in Standard of California's production department, has been selected as one of 14 young men to be granted a Sloan Fellowship in specialized study at Massachusetts Institute of Technology. The honor resulted from competition among outstanding condidates nominated by industrial firms countrywide.

---

Oil men were prominent among those in attendance at Hollywood Park's beautiful Turf Club for the running of the annual Gold Cup race. Up high in the director's circle was Thomas W. Simmons, president of Hollywood Park and veteran oilman. Other members of the oil fraternity glanced here and there were George Ring, George Stratton, Loren Hillman, Bob Lytle, L. L. Aubert and Herb Kohlbush.

---

Herbert R. Herbst, oilman, has purchased for $67,100 the Bel-Air home of the late Ernest Lubitsch, widely known film director.

**James F. Alexander, formerly Los Angeles District Superintendent for the Lane-Wells Company, has been given military leave of absence to report for active duty with the army. Alexander has been with the Lane-Wells Company for over three years and has been associated with the petroleum industry since his graduation from Tulsa University in 1941. He started with the Shell Company of California, worked for Atlantic Refining in Texas and then served in the Army. Alexander received a commission in the Signal Corps where he became a radar instructor and worked in electronic development. At the time of his release in 1946 Alexander had attained the rank of Captain. His new duties for that same service will take him to Washington, D. C.**

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Shell Oil Company and Shell Development Company held their 39th semi-annual research conference at the Feather River Inn, Portola, California. Among executives, research scientists, engineers and technologists in attendance were vice presidents Jimmy Doolittle and C. E. Davis from Shell Oil Company, and president M. E. Spaght and vice president T. W. Evans and A. J. Johnson from Shell Development Company.

---

Carl Totten, public relations director from Shell Oil Company in Southern California, has departed for a well-earned vacation in points in Oregon. He will return to his desk in Los Angeles in about three weeks.

---

Edwin W. Pauley is on an extended vacation at Hawaii. During his stay there he is entertaining many of his friends on his Cocoanut Island estate.

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## Dampening Pulsations

*(Continued from page 11)*

dicator cards. This is due, in part to the difficulty of obtaining accurate cards on the type of machine being used, and in part to the lack of an indicator for use in the higher pressure ranges. However, the output of the compressors is essentially that which would be predicted from the header pressures. And fuel consumption and exhaust temperatures indicate that the engines are not overloaded when operating at rated speed and at rated compressor suction and discharge pressures. Because of this, and the vibration-free piping it assures, we have become consistent users of pulsation dampeners on all permanent compressor installations.


[1] Arnold, Marion L.
"Vibrations in Compressor Piping," Oil & Gas Journal, January 6, 1945, pp. 54.

[2] Stephens, Foster M.
U. S. Patent 2,405,100.

[3] Hirschorn, Martin
Chemical Engineering, September 1949.

[4] Murphy, Eugene F.
Doctoral Thesis, Illinois Institute of Technology, June 1948.

[5] Theil, B. C.
The Petroleum Engineer.

[6] Murphy, Eugene F.
California Oil World, First Issue, February 1949.

[7] Stephens, Foster M.
U. S. Patent 2,474,555.


**Prepared especially for California Oil World from a talk given by Mr. Arnold before a recent meeting of the National Natural Gasoline Association.**

## Atlas Installs U.O.P. Platforming Unit

Work has been started on the installation of a 4,400 barrel per day UOP Platforming Unit at the Atlas Processing Company, Shreveport, Louisiana, according to an announcement by J. B. Atkins, president.

The Platformer, Atkins said, together with an extractive-distillation unit will comprise the major facilities of a new multi-million aromatics plant being built for the production of benzene which is in critically short supply.

The Platforming Unit, which will be built with the utilization of some existing refinery equipment, has been designed to process a charge stock of approximately 200-330°F. boiling range naphthas obtained from Carthage, Texas extraction plants. This unit, when placed in operation will enable Atlas to convert their low-quality naphthas into motor fuels of the highest quality.

The Atlas Platforming Unit, which was designed by Universal Oil Products Company, Chicago, discoverers and developers of the UOP Platforming Process which uses a platinum-containing catalyst, is being constructed by Procon Incorporated, Chicago. Atkins stated it is expected that the unit will be completed and placed on stream during the early part of 1952.

## Bardsdale Well Starts

Milton Barratt and E. E. Bysshe, Jr., are beginning Bardsdale No. 2 well in the Bardsdale field, Sec. 7-3n-19w, Ventura County. Union Oil's Dryden No. 23 on Sec. 12-3n-20w is a new producer. It came in from 7337 ft. for 235 barrels of oil daily on the pump.

## Ant Hill Test Digs

Northeast of the Ant Hill field in Kern County, Arthur C. Fisher is drilling near 750 ft. with his Linda No. 9 on Sec. 13-29s-29e. Location is two miles from production.


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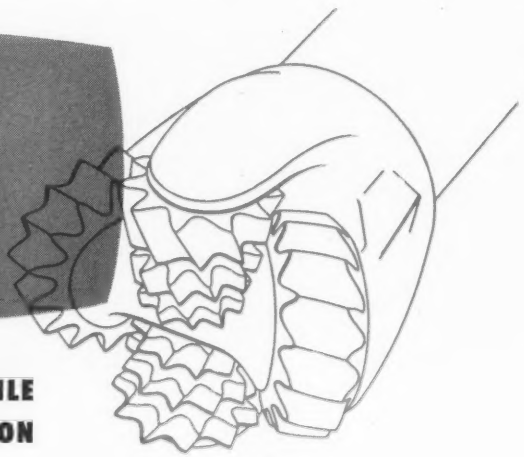

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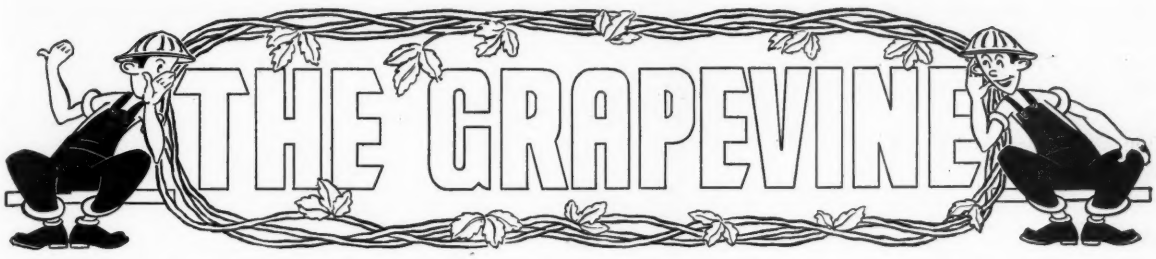


We had lunch a few days ago with the effervescent Joe Swaton, former Kerotest biggie, who is now operating a mountain spa up in the wilds of June Lake, and looking as if the high altitude agreed with him perfectly. Last time we consorted with Joe was several years ago in a dimly lighted San Francisco rathskeller where we exchanged lies about what we had done for the oil industry and towards the heel of the evening solemnly swore with hands clasped over a basket of potato chips that we would always and ever comport ourselves as true and devoted members of the hydrocarbon family. And for the benefit of the doubting thomases who don't believe in such outward expressions of fidelity, it might just be remarked that from that day to this neither one of us has been in jail a single time.

Accompanying Joe to the lunch was Roland Smith, ex-prexy of the L.A. chapter Nomads and one of our better looking export representatives. Roland had just returned from a trip to South America and was loaded with interesting news about people and things. F'rinstance, he tells us that on a certain evening in the Avila Hotel at Caracas, Venezuela, Robert Ripley, had he been there, could have picked up one of the most exciting believe-it-or-not items in believe-it-or-not history. It seems that on the night aforesaid, the Hotel register carried the names of three ex-presidents of Los Angeles chapter Nomads and three, mind you, who had held office in successive years —1943, 1944, and 1945. Not to keep you in suspenders any longer than is necessary, they were Henry Pullman, the ubiquitous Baker Oil Tool ambassador who has probably traveled more miles than Vilhjalmur Stefansson and knows every foreign operator this side of the planet of Mars.

The second was Roland Smith himself, the beau brummel of the equipment set, whom we remember as a pretty sharp performer on the Nomad rostrum. And the third was none other than Elmer Smith, the quiet mannered, curly haired chap who used to be some sort of sales biggie for Lane Wells, and is now a more or less permanent resident south of the border. Needless to say the trio held wads of wassail in celebration of this unique event, while peace-loving Venezuelans watched from outside and


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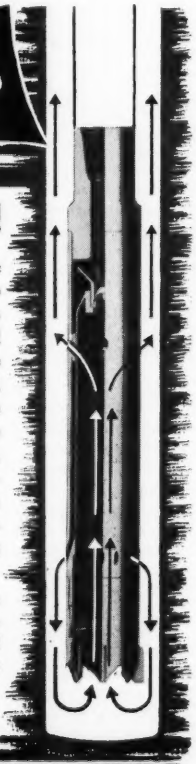

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wondered what was making the hotel walls expand and contract like a Walt Disney structure that is being subjected to the old "huff and puff" routine.

This reference to Lane Wells reminds us to congratulate Jim Hughes, one of our favorite people, on his recent elevation to a directorship in the Company. It certainly couldn't happen to a nicer guy and from what we have been able to observe on the outside the promotion is well deserved. Jim is a big, attractive, good natured chap who has plenty on the ball. He is a keen student of human relations in all its aspects and he is a mighty fine advertisement for his own ideas and practices. Anyway, it is tremendously satisfying to add a director to our list of personal acquaintances even if we do unconsciously add a "sir" now every time we address him. Another thing that disturbs us no little is that since this thing happened perhaps we should move into a more expensive flat. It is a tiny bit of a nuisance now having to associate with just ordinary people.

It is odd how many oil men have been in the news lately. Being something of a tennis fan we were interested to read in the morning paper a short time ago that the finals in a northwestern tournament, possibly at Tacoma, Wash., were Herschel Hyde, the Tide Water refinery chap on whom we wrote a profile for this column some time ago, and Marvin Miller, a Glendale boy whom we have watched in action many times. Marvin carried off the bacon but although he is probably 20 years younger than Herschel we are willing to bet four dollars that he knew he was in a battle. When Hersch gets on the other end of a tennis racket his total performance is as satisfying as the service of a Flying A dispenser.

Then on the first night of Union Oil Company's fire at Wilmington, we got quite a bang out of seeing on our television screen, Union Oil Company's safety whiz, Claude Van Marter, whom the announcer insisted on calling "Van Mater." At the moment we tuned in, Van and some fire chief were debating the merits of a plan to close off a valve in the middle of what Dick Lane repeatedly described as a "holocaust," and it was assuredly all of that. Anyway, it reminded us of the days when we used to debate with

**OIL'S NO. 1 BASEBALL FAN**

**There are many pretty wonderful people in the oil industry but you would have to do some tall searching to find anyone so completely genuine and altogether admirable as the Evanston, Illinois, lad whose broad delight in the horticultural arts is so faithfully depicted here. It seems almost superfluous to mention that his name is Elmer Olsen, so well has he become known among the oil people of the deep California south, where he functions, and mighty adequately we are told, as assistant to George J. O'Brien, vice president in charge of Standard of California's manifold interests down hereabouts. In his younger days, Elmer did a stint with International Harvester back in Chicago, but the chill winds that screamed off Lake Michigan in the winter made him pine terrifically for the wide open and warm spaces of the far west. In due course, thus, we find him out in Arizona under a five gallon hat dispensing Standard Oil products and the sunshine of his invariable smile in such interesting bailiwicks as Holbrook, Yuma, and Phoenix. For 15 enjoyable years he foraged about Arizona and then was transferred to Los Angeles as assistant sales manager. Some six years later he was taken over by George O'Brien and has remained his aide to the present time.**

**Elmer recently acquired a new house in Los Angeles and has been giving his spare moments to landscape gardening and other manorial chores. In normal times, however, he is an avid baseball fan and has been known, while still eating roasted peanuts, to humble an erring umpire no end with accurately hurled bolts of blistering scurrility. He has also in the past derived some weekend pleasure from digging a moat around a Spalding Red Dot with an 8-iron but that project, too, has been abandoned while the grounds around the Olsen chalet are being groomed into becoming orderliness. Elmer undoubtedly finds his greatest enjoyment in associating with petrolic people and the enjoyment is certainly reciprocal. Over the past decade his beaming presence has illuminated many a Standard Oil Co. party and his solid sincerity is as comforting as a 1500 barrel well.**

Claude on matters of minor import but in tones and volume befitting matters of major import. We once sold him a violin made from the maple flooring of the old city hall in Glasgow, Scotland. It was later stolen from him — probably by some Caledonian who deemed it sacrilege that such a precious relic should be in the hands of an ex-Rodeo resident. Also, perhaps it is only fair to confess now that we were one of the guys who sneaked in and ate the Van Marter peanuts while Claude was downstairs trying to coax a pint of grain alcohol out of Charlie Pedersen.

Featured in this same broadcast was another great safety man with whom we have bandied words of wisdom on divers occasions, to wit, James Marshall. We seem to have known Jess from about the time that Colonel Drake started this whole mess. Jess, an interesting chap at any time, is literally fascinating on a golf course. He actually coils when preparing to thrash the sod adjacent to the ball, and when he finally unwinds makes a noise not unlike the whir that results when a sheet of notepaper is thrown into the blades of a busy fan. The noise that he makes when he discovers that the ball is still there after he is all through lashing the sward is quite indescribable. However, a Billingsgate fisherman once made a pretty good attempt at describing it.

Another surprise was ours a few nights later when again twirling the nob on our television set we caught a fleeting glimpse of a shiny blac' poll that had a very familiar look. Backing up, we realized at once that this was none other than Bill Geis, the suave Petroleum Club director, who was engaged in a hectic discussion with other experts on the subject of the Anglo-Iranian oil crisis. Bill did his usual fine job of expounding. In fact, we think he is, without question, one of the best elucidators in the industry. Actually, it seems rather a shame that one man should be endowed with so many talents. You see, Bill is also a playwright and a sharpie at dominoes. As a matter of fact, in several years of the stiffest competition, he has never been known to drop a peg. Once as he was banking to round the skunk corner, he almost lost control of an unusually small aluminum peg but just at the psychological

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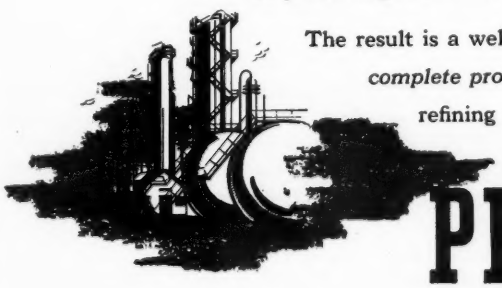

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moment, the old battling spirit asserted itself and he recovered his self-possession just in time to plunge the marker deeply into the 33 hole.

And speaking of the national pastime, we have been humiliated no end in our recent encounters with Tom Sherman, the Huntington State fashion plate by whom we have been trounced so thoroughly and so often that we are in mortal fear of becoming complacent about it. Tom plays the European parry and riposte system, while we adhere strictly to what is known as the Boston botch. The result is that in every joust so far we have been able to make our most substantial counts with the dominoes we have left after Tom has finished and gone to the washroom. We are just conceited enough to believe that this ignominy has nothing to do with a lack of intelligence. If so, how come we held the croquinole championship of Westlake Park against the stiffest competition for four years? Also, how come we were only thirteen years of age when we won the 100-yard dash for boys under ten?

Some 250 Nomads and guests assembled at the Riviera Country Club on Friday, July 13, and had a very lovely time playing golf, conversing, eating and watching a really top hole vaudeville show. Bill Wilson, the proprietor of the loud shirts, and George Gutekunst, who runs him a close second in the shirt department, were in charge of the divot lofting exercises, and as usual Joe Schlarb was hovering around in the background. The entry was in excess of 90 so the committee had a very busy day getting the foursomes started off and keeping track of them thereafter. Among the prize winners we noted Jack Smith, the much traveled International Cementer; Bill Moffett, whose attachment we don't know and the committee couldn't tell us; Tom Bell, the Texas Company production authority; Herb White and Art Titus, another pair of good sod elevators whose origin we were unable to ascertain but whose golf acumen was undisputed; Jack Freeman, the handsome Bethlehemite; and Tiny Bush, the considerable Emsconian.

Aiding Jerry Engstrand, the Grant Oil Tool and MacClatchie vice president, on the arrangements, were Jim Hughes and Earl Rees, neither of whom happened to be around on the day of the Whingding. Also Bill Sargent, the well known Sultan of Wham, was implicated in a pretty substantial way and was present for the festivities but not feeling in the best of shape. Bill went to the hospital next day for an operation and we are hoping that by the time this appears in print he will again be able to propound the explosive narratives for which he has become famous. Incidentally, we stopped in at a very nice cafe down South Gate way recently and found the place in possession of a platoon of Sargent boys—all nice boys, and very generous. We profited much by their goodness on this occasion and shall be watching for a chance to reciprocate one of these days.

Ran into our old friend, C. S. "Pen" Penfield, the canasta expert, out at Riviera, and learned that he is going down to Maracaibo for Shell at the end of the summer. We expect to have another session with him soon and will try to develop further details of his coming adventure. Also had a few minutes with Bill Heater, the Baroid Burbank, and his husky henchman, Ed Mohr, and were informed that a lot of the Baroid set-up will move to Houston before long. (P.S. The macadamian nut tree remains adamant). D. H. Greenwood of the famous Falcon series inquired about the next PPP get-together and we were able to tell him that Ben Anderson, Earl Daniels, and Paul Andrews were just completing arrangements for a meeting at Bakersfield on September 15. According to L. L. Aubert, president of the Petroleum Production Pioneers, the general meeting will be preceded by a dedication ceremony at Fellows, marking the site of the first gusher in the Midway Field, C.C.-M.O.'s Well No. 2-6. Location for this well was chosen by F. C. Ripley, Sr., then assistant manager of oil properties for Santa Fe Railway Coast Lines, and he will be cited in the commemorative plaque that is to be erected as well as in the dedication ceremony.

Returning to our meeting with Roland Smith, we understand that another interesting gathering took place at the Caracas Country Club during his sojourn in Venezuela. This was sponsored by Nelson Rockefeller and attended by many of the leading oil men of South America. Among the guests was Art Proudfooot, Creole president, who is well known to Los Angeles Nomads. He sent back warm greetings to the oil folk here about. Jim and Mrs. Dempsey of Shell Caribbean at Maracaibo who have been hosts to many a wandering Californian also send back best regards to all their Pacific Coast friends. Jimmy Wirtensohn, general drilling superintendent for Shell Caribbean is due home on his long leave come October, and we are told that B. Reinhold is over doing the rounds in France, Switzerland, the Hague, and Britain.

Many years ago Frank Hill, then director of production for Union Oil Company, was dictating a resume of production activity over a current period and because his regular secretary, Mrs. Rickenbacker was not available was using a girl from the reception room who was totally unfamiliar with geological terms and was decidedly flustered to boot over her first major commission. Frank dictated, "Perhaps the greatest disappointment that Union Oil Company has experienced during the past six months was the encroachment of edge water into the principal member of the Temblor." What the young lady typed was, "Perhaps the greatest disappointment that Union Oil Company has experienced during the past six months was the encroachment of water into the principal members on the tenth floor."

## Trico Test Planned

Harry H. Magee has staked location for an interesting test well in the Trico area on Sec. 20-25s-24e, Kern County. Called Powell No. 1, the gas test is slated for immediate drilling about two miles southwest of production. The Trico field creeps over parts of three counties —Kern, Kings and Tulare.

## Mason Canyon Wildcat Starts

At Mason Canyon near Shandon in San Luis Obispo County, General Petroleum has commenced work on its Hillman - Darnell No. 22-34 on Sec. 34-25s-19e. The drill site is four miles southeast of Standard Oil's Cleary-Hillman No. 44-8, which was abandoned early in the year at 3850 ft. British-American Oil is building roads for its Dodd-Thomas Unit No. 3 in the Panorama Hills area, Sec. 9-31s-21e. Shell Oil, according to the most recent information, was

# With Drilling Contractors

Automatic drilling of oil wells will be perfected and automatic production of oil leases will be extended in the near future. This prediction was made by John H. Starbird, production engineer for Western Gulf Oil Company at Paloma, and E. L. Petree, district superintendent of Gulf Oil's Houston division. Starbird disclosed that automatic controls are under development and aimed at allowing devices on drilling rigs to operate by themselves after proper adjustment by the driller, and to take care of variances in operation without further correction. He explained that such equipment will not replace the driller but will relieve him of the constant alertness demanded to operate the drill brake and give him more time to supervise rig maintenance. Many advantages will accrue by the resulting mechanical elimination of human error, he said. By controlling the weight of the drill pipe string with self acting precision, the danger of a twist off will be decreased sharply. By permitting the bit to drill at maximum speed at all times, even while the driller is supervising the rig, the self-moving equipment promises to reduce drilling time. Starbird said automatic weight control is expected to reduce bit wear. The automatic equipment is also capable of giving directional accuracy, a factor contributing to the drilling of holes straight. Taking up the application of automatic devices in producing oil leases, Petree revealed that beginning in 1948, a number of leases have been so equipped. As a result of these experiments, the devices used have reached the proved stage, he said. The equipment permits wells of the leases to be produced on a 24 hour a day basis, or to be turned on and shut off at intervals required to produce a specified output of oil a day. In East Texas, leases totaling 415 wells are already being automatically produced and tentative plans are to substantially extend the method, he stated.

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Loffland Bros. Drilling Company has moved in a large Diesel powered rig to begin operations on R. S. Lytle's interesting wildcat well in the Hovey Hills area of Sunset-Kern Co. As operator for a combination of interests made up of Universal Consolidated, Sunray Oil and Calgush Oil, Lytle sponsored the well on Sec. 6-11n-24w. The venture is scheduled to go to the Gonyer sand to test showings picked up by Richfield with its Gonyer Unit No. 1 drilled in 1945. In the event the well is successful, a wide spread of ground will be opened to prospecting and subsequent development. A fortunate outcome to the new play might reasonably open some 50 miles of land along the Temblor Range to wildcat drilling. Lytle's lease block takes in about 1300 acres five miles northwest of considerable ground recently leased by Richfield from Kern County Land Company. In addition to his individual interests in the play, Lytle is a general partner of Calgush Oil Company.

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Pike Drilling Company de Mexico is preparing to drill another well for Edwin W. Pauley near Reynosa, state of Tamaulipas, northeast Mexico, an aftermath to completion of Lomisto No. 101. Pike also is drilling below 7500 ft. with a well for Petroleos Mexicanos. It is known as San Angelo No. 1 and is a dozen miles inland from San Ignacio lagoon and 500 miles south of the border.

---

The number of wells drilled each year is increasing. As an example, 44,000 wells is the goal for the year current. A. W. Thompson, president of the American Association of Oilwell Drilling Contractors, said for this reason any improvement in materials or operations is magnified to the extent of the number of wells drilled. He remarked that he has felt that participation of the drilling contractor in standardization work is a very vital undertaking. This cooperative effort has been accelerated by the appointment of representatives of drilling contractors to the various standardization committees, such as wire rope and rotary drilling equipment. Standardization work of the American Petroleum Institute's division of production was initiated in 1924.

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E. C. (Ned) Brown, head of Brown Drilling Company of Long Beach and one of the most popular members of the drilling industry, surely is out-doing Marco Polo as a traveler of renown. Up to last June 30, Brown had journeyed the distance of 20 times around the world or a total of 500,000 air miles.

Duward Ryon, who has been active for Brown both locally and in the company's Middle East operations, is convalescing successfully from surgery. He gained considerable fame in his earlier days as a rodeo bronco buster and a wild Brahman bull rider.

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## Piru Try Drilling

At Piru in Ventura County, Continental Oil's Continental-Herley USL No. 1 wildcat venture continues to drill ahead at 3406 ft. In the Sespe area, cable tool drilling has reached about 400 ft. in Nathan No. 10 test well sponsored by Pacific Supply Cooperative on Sec. 23-9n-20w. Shell Oil has completed its Taylor No. 335 test on Sec. 30-3n-23w at Ventura Avenue at 908 ft. for 192 barrels of oil and 193,000 cubic ft. of gas daily. In the Cat Canyon field, Western Gulf has abandoned at 6202 ft. its Palmer-Stendel No. 66.

# Field Development

## Los Angeles Basin

### Del Valle Adds Well

Southern California Petroleum Corporation has clicked with another excellent producing well on the south flank of the Del Valle field. Its extension test, Anderson-Vasquez No. 6 on Sec. 21-4n-17w, started flowing following three runs of the swab. In the first three hours it put out a total of 153 barrels of oil through a half-inch choke. During the ensuing 60-minute priod it produced 46.6 barrels under restrictions of a 28/64-in. orifice. This is about 1120 barrels a day. Cut was less than one per cent. Total depth of the new producer is 6250 ft., with 7-in. casing set at 6020 ft. The company has also added the final chapter to its N.L. & F. No. 1 test on Sec. 20-4n-17w. The project came in from 9023 ft. flowing initially at the rate of 110 barrels daily.

### Prado Dam Try Sets Pipe

Surface pipe has been cemented at 2000 ft. in Cherrydale Oil Company's Cherrydale No. 1 wildcat project on Sec. 8-3s-7w in the Prado Dam area, Riverside County. Present depth of the well is around 400 ft.

### Long Beach Adding Wells

Not far from the intersection of Wardlow road and Lewis Avenue, Golden Dome Oil Company, Ltd. has completed its Wardlow No. 2 on Sec. 18-4s-12w for an initial output of 1350 barrels of 32.4 gravity oil and 1,500,000 cubic ft. of gas daily. The well is bottomed at 7300 ft. Near American avenue and Wardlow road, Delaney Petroleum and Charles E. Cather have finaled Cather No. 2 on Sec. 13-4s-13w for a yield of 45 barrels of 22 gravity oil on the pump from 4370 ft. Developments in the area in the northwest portion of Signal Hill have resulted in considerable excitement and a marked revival in drilling activity.

### Orange County Wildcats Busy

Shell Oil Company at last reports was coring with its two wildcat wells in Orange County. Irvine Four No. 51-130 on Sec. 5-7s-9w at Corona Del Mar was working below 8000 ft. Irvine One No. 44-166 on Sec. 11-7s-9w in the San Joaquin Hills has reached 9840 ft. No showings of interest have been reported to date. In the Anaheim area, Continental Oil's Anaheim Comm. No. 4-1 on Sec. 5-4s-10w is digging at 6930 ft. Between West Newport and Huntington Beach, Burke A. Thomas and Blake L. Baldwin have suspended drilling at 2929 ft. with Pocohontas No. 1 test on Sec. 13-6s-11w. Under interrogation at this writing was the interval of 4805-5070 ft. in Bay View Oil's Sunset No. 1 near the intersection of Los Patos and Highway 101 on Sec. 30-5s-11w at Sunset Beach. Drilling and coring at 4640 ft. was the last word from Union Oil's G. & L. No. 61-12, a test well in the Brea-Olinda area on Sec. 12-3s-10w. Universal Consolidated continues to make progress with the drill in its Tuffree No. 101 wildcat at East Coyote. The well, on Sec. 19-3s-9w, is poking deeper at 4848 ft.

**Cleveland Oil Company's Bardsdale No. 1 in the Grimes Canyon Field. Dunlap and Graham, drilling contractors. Left to right: L. D. Lutts, pipe racker; L. D. Morgan, lead tong; T. K. Knox, driller and K. H. Beck, derrickman.**

## Whittier Try Starts

About to spud in the Whittier area is Los Nietos Company's Whittier Crude No. 2 on Sec. 22-2s-11w. North of Whittier Heights, the Sam Kubetz wildcat known as Kline No. 1 on Sec. 11-2s-11w is idle at a depth near 1510 ft. Still a location is Bell Petroleum's Dubois No. 1 at Bartholomaus Canyon on Sec. 6-2n-14w.

## Lopez Canyon Wildcat Drills

E. L. Doheny, Operator is drilling at an inconclusive level with his Reeves No. 1 wildcat venture on Sec. 1-2n-16w in the Lopez Canyon area, Los Angeles County. It is a joint venture with Neaves Petroleum Company of Beverly Hills, headed by Joseph Neaves. Several hundred acres are involved in the lease which is a mile and one-half west of the W. W. Bush wildcat at Bartholomaus Canyon. The latter along with other wells punched down in area are credited with showings, a factor which to a large extent prompted the Doheny try. In addition to its holdings at Lopez Canyon, Neaves Petroleum has leases in Kagel Canyon and the Little Tujunga area and a number of very interesting parcels at East Coyote. Neaves recently leased some 3000 acres of land in proved and semi-proved areas in Callahan and Coleman Counties, Texas.

## Santa Fe Well Pumps

Standard Oil has given the final touch on the pump to its Walker Comm. No. 25 near the corner of Curtis avenue and Ward street in the Santa Fe Springs field. Drilled to a bottom of 7920 ft., the Clark-Hathway zone is open to production, but at this writing it was too early to properly evaluate the well's true capacity to produce.

## Castaic Busy Drilling Area

Humble Oil and Refining is drilling at 8800 ft. with its Newhall Corp. No. 1 test on Sec. 24-4n-17w at Castaic and at 8790 ft. with its N.L. & F. No. 6 on the same section. On the Honor Rancho, Texas Company's No. 5 on Sec. 6-4n-16w is in for a present yield of 810 barrels of 36.5 gravity oil through a 16/64-in. bean. Total depth is 6482 ft. Texaco's deep test, No. 4 on the section, is digging away at 9780 ft. No. 6, also on the section, is moving in. In the Puente area, the company is engaged on work preliminary to spudding its McGinnis No. 1 on Sec. 31-1s-10w. Superior Oil has begun work on its N.L. & F. No. 1 on Sec. 8-4n-16w.

## Basin Tests Standing Idle

A number of test wells in the Los Angeles Basin currently are standing idle. George Allen's No. 1 on Sec. 19-5n-16w at Castaic is inactive at 1802 ft. Bishop Oil's Mary Austin No. 1 on Sec. 28-6n-17w is idle at 3648 ft. W. W. Bush's Bush Bar No. 1 on Sec. 6-2n-14w is dormant at 2988 ft. The James Rhoten Farned, John G. LaVally and Walter D. Greer wildcat on Sec. 15-6n-13w near Palmdale is idle for the time being at 196 ft. In the Saugus area, a wildcat undertaken by Humble Oil & Refining is idle at 8766 ft. on Sec. 9-4n-16w.


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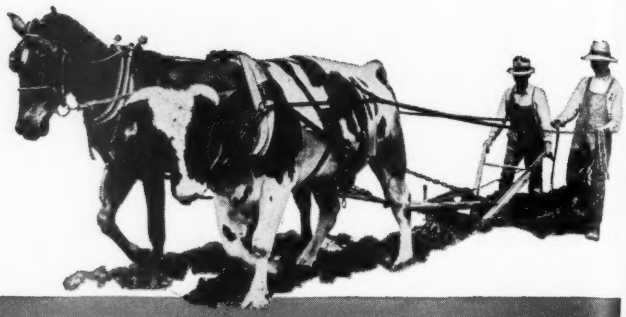

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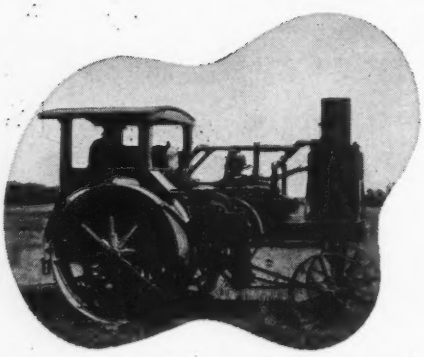

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# San Joaquin Valley

### Fairfax Try Digs

Rothschild Oil Company, producing and marketing organization at Santa Fe Springs, is drilling steadily below 1000 ft. with its McKean No. 1 wildcat in the Fairfax area north of the Mountain View field. The project, on Sec. 12-30s-28e, probably will go all the way to the Wicker zone expected near 5000 ft. in the event the Santa Margarita at 4000 ft. fails to put out oil along commercial standards.

### Arvin Scene Of New Find

Texas Company has run 7-in. casing to a point above bottom at 6516 ft. in its George No. 1 on Sec. 23-31s-29e one mile northeast of production in the Arvin field. Bottomed in granite and schist, the well probably will be produced from the approximate interval of 6360-6418 ft. Loffland Bros. drilled the test on a lease embracing no less than 500 acres. A formation test from 6360 to 6424 ft. showed a net rise of 700 ft. of oil, cutting 10 per cent mud, during a period of one hour. South of the Lost Hills field, the company is digging at 4980 ft. with E. L. Martin No. 1 wildcat on Sec. 9-27s-21e. Texaco has staked locations for Tolco No. 1 at West Bacon Hills on Sec. 20-28s-20e and T. S. Glide Two No. 2 on Sec. 33-27s-28e west of the Mount Poso field.

### Raisin City Land Purchase

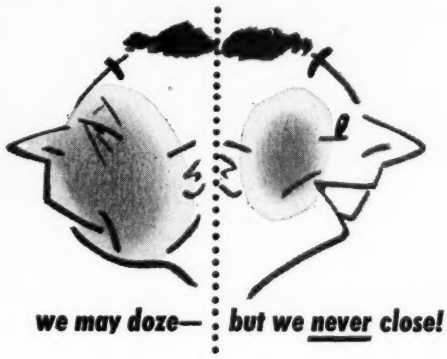
J. D. Sterling, president of Sunset Oil and Eagle Oil & Refining, announces the acquisition by his group of controlling interest in Mission Oil, Real Oil and Padre Oil. He said that these three companies hold leases on about 570 acres in Raisin City field and at present are producing 49,000 barrels of oil a month.

### Cuyama Deep Well Abandoned

The well that went deeper than any other hole in Cuyama Valley has been abandoned by Richfield Oil at 12,981 ft. The well, Russell No. C-2 on Sec. 10-10n-26w was tested but showed nothing of commercial interest. Two miles northeast of the Taylor Canyon field, Humble Oil's Federal-Sawyer No. 1 on Sec. 28-32s-20e is making hole below 1200 ft. Land within a mile of the well is held by Bandini Petroleum, Hancock Oil, Standard of California and General Petroleum.

### Belgian Test Starts Work

Bent on attempting to extend Pacific Western production on the Belgian Anticline northwesterly, Ohio Oil Company has staked its Tulare Fee No. 1 on Sec. 19-30s-22e.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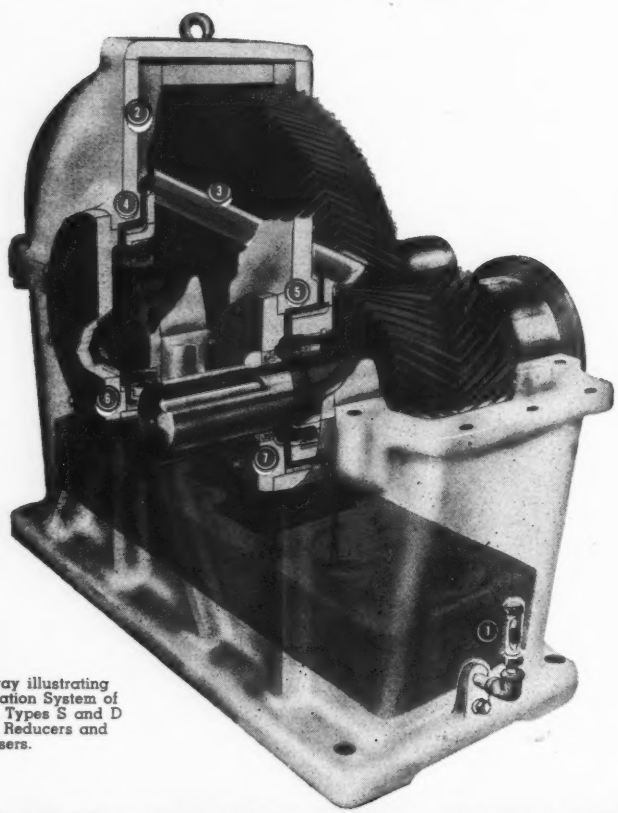

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### Temblor Try Sited

Still a location at this writing is Cal-Air Petroleum's Sun Crest No. 1 wildcat on Sec. 26-29s-20e in the northwest Temblor area. Southeast about three-quarters of a mile lies shallow production in the Temblor field and two miles northwest of the Ferguson & Bosworth new field discovery west of Salt Creek. The latter, Anderson No. 2, on Sec. 19-29s-21e, is pumping 20 barrels a day from 496 ft. The Phacoides sand was topped at 453 ft. Superior Oil holds land south of the new pumper. In the Poso Creek area, Ferguson & Bosworth has staked location for Glide No. 1 on Sec. 31-27s-28e.

### Pyramid Hills Find Pumping

Norris Oil Company's discovery well south of Pyramid Hills in Kings County at last reports was pumping at the rate of 100 barrels a day gross or 40 barrels of 14 gravity oil net, with the cut showing a marked disposition to decline. The well, No. 115-28, is on Sec. 28-24s-18e and a short distance from the company's previous test, which was abandoned at 1385 ft. after coring a section of oil sand. The sand measure was wet in the lower portion, a condition which probably accounted for abandonment. Norris Oil Company was organized more than six years ago. In Cuyama Valley, the company drilled four dusters before its well near Chalk Mountain picked up an oil pool. In the Armona area, Tide Water Associated's Gomes & Silveria No. 8-13 is drilling at 8800 ft. on Sec. 13-18s-20e. Reef Ridge Oil's No. 1 wildcat at Reef Ridge on Sec. 10-23s-16e last was reported coring at 1700 ft. General Petroleum's Boston Land Company No. 48-7 on Sec. 7-20s-19e near Huron is down below 11,800 ft. and pushing the drill deeper.

### Pyramid Hills Wildcat Staked

Alva McPhail and Roy Gill are ready to start work on McPhail No. 1 on Sec. 14-24s-18e in the Pyramid Hills area of Kings County, south of the Norris Oil Company discovery well.

# Coastal and Northern District

## San Ardo Pipeline Carrying Crude Oil

General Petroleum's new and unique pipeline has been placed in use and the first tanker of San Ardo crude oil was loaded at Estero Bay on July 6. The tanker loaded more than 80,000 barrels of oil through facilities leased from another company. Approximately 80 per cent of the load was crude oil. The remainer was light cutter oil which is brought in to be mixed with the heavy, sticky San Ardo crude oil to induce flow. It will not move in an ordinary pipeline. The cutter oil is delivered to San Ardo through a small pipeline which parallels the larger one. The new General line was built at a cost of some $2,000,000. It employs heat as well as cutter oil to coax the oil to flow. The mixture of cutter oil and crude oil is heated as high as 175 degrees as it is pumped along the 40-mile pipeline route to the sea. The San Ardo field at present is putting out 2800 barrels daily. Materials for the line, including both pipe and pumping installations, were obtained by dismantling a 38-year-old dormant pipeline in the Mojave Desert. More than 98 per cent of the old pipe was in shape for use again thanks to the special reclamation technique worked out for the project. Saved by the reclamation was about 2500 tons of scarce pipe and many thousands of dollars. There are at least a dozen jobs drilling at the present time in the San Ardo field.

## Princeton Test Drills

Honolulu Oil is drilling at 1560 ft. with its Honolulu - Humble - Wild Goose No. 1 wildcat on Sec. 17-17n-1e at Princeton in Butte County. This is five miles southeast of the company's abandoned Terhel Farms No. 1, which was abandoned last April.

## Frazer Mountain Wildcat Well Quits

A wildcat well undertaken by Arthur C. Fisher some 10 miles west of Frazer Mountain in Ventura County has been abandoned at a total depth of 974 ft. in granite. The well Curyea No. 1 on Sec. 27-9n-23w apparently topped the granite at 930 ft. Location was roughly halfway between Russell Ranch field in Cuyama Valley and Fort Tejon on the Ridge Route.

## San Gregorio Creek Wildcat Drills Ahead

A short distance from Stanford University, Bell & Burden, Inc. contract drilling company, is drilling at an inconclusive depth with Riskin No. 1 wildcat on Sec. 13-7s-5w, San Mateo County. The well is in the San Gregorio Creek area and it is the first job Bell & Burden has drilled purely on its own account. In the Pescadero area, Texas Company's Mattei Estate No. 1 test on Sec. 34-7s-5w is drilling and coring in shale below 5200 ft.

## Figueroa Mountain Wildcat Plugs Back

Honolulu Oil's Mills No. 1 wildcat on Sec. 26-8n-30w in the Figueroa Mountain area of Ventura County is plugging back from a total depth of 3232 ft. to redrill. The well is eight miles east of Zaca Creek and 20 miles southwest of the South Cuyama field.

## Camulos Ranch Test On Calendar

Ted Sterling as operator for Paul W. Trousdale, noted builder, has leased some 1900 acres on the Camulos Rancho and 137 acres of J. M. Sharp Company land adjacent to the ranch on the east. Mapped out for the property is a test to no less than 900 ft. The play is interesting. Southern California Petroleum's new field discovery northwest of the Newhall-Potrero field is about three miles east of the ground leased by Sterling. Wells producing for Crestmont Oil Company on the Ramona anticline are roughly one mile northeast of the northeast corner of the Camulos Rancho. The new campaign may duplicate success of Southern California Petroleum by finding an


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accumulation along an east-west trending fault. Moreover, the Ramona anticline may be found coming down on the Sterling acquisition. The same combination of interests is preparing to drill its Rynne-Fisher No. 1 test on Sec. 35-5n-17w, approximately a mile and one-half northwest of Texas Company's most recent completion on the Honor Rancho. It is located up dip from the Texaco producer. About 720 acres are held in the area. Purchased recently were several leases, including land once the scene of a wildcat drilled by Macson Oil Company. The latter's Radovich drilling efforts found enough showings to encourage further drilling in the area despite their sub-commercial aspects.

### Templeton Try Starts

Gene Reid Drilling Company has started a wildcat venture about three and one-half miles east of the town of Templeton in San Luis Obispo County. The test is called Heilman No. 1 and is on Sec. 35-27s-12e on the Rocky Canyon uplift. Drilling probably will be carried to around 4000 ft. in the well, which is about six miles south of Paso Robles.

### Napa County Wildcat Rigs

Western Gulf is approaching the spudding stage with its J. N. Knowles No. 1 exploratory well in the Vaca Mountain area on Sec. 28-9n-3w, Napa County.

### Elwood Test Starting Work

Work has begun on Fowler Hull & Company's Rutherford No. 1 wildcat on Sec. 36-5n-30w in the Elwood area. D. S. Fletcher also has commenced work on his Catlin-Fletcher No. 1 test at Carpinteria on Sec. 33-4n-29w.

### Reyes Peak Test Drills

Standard of California's Hattie Russell No. 1 wildcat on Sec. 11-6n-23w in the Reyes Peak area of Ventura County is slugging away at 7260 ft. Information on the well is more or less a company secret, but fieldmen indicated belief that nothing of importance has shown to present level. Drilling has been long and difficult due to the primitive terrain. The project has been actively drilling for 325 days.

### Orcutt Test Drills Ahead

Union Oil's Hartnell No. 12 test on Sec. 22-9n-34w is coring on down at 4810 ft. In the Guadalupe area, Union's Los Nietos Company's LeRoy No. A-2 on Sec. 14-10n-36w is making hole ahead below 3600 ft. The latter is in the Guadalupe area, where the company recently completed Union Sugar No. 36 on Sec. 10-10n-36w. This well came in from a plugged depth of 3410 ft. putting out three barrels daily, cutting 99 per cent. In the Tip-Top-Fresno area, Union's Ex-Mission Fee No. X-3 on Sec. 10-3n-22w last was reported digging at 6715 ft. Ex-Mission Weldon Canyon No. 3 on Sec. 3-3n-23w is rigging up.

### Watsonville Test Abandoned

Texas Company has pulled out of its Light No. 1 exploratory venture west of Watsonville in Santa Cruz County. Drilling stopped just five feet short of the 3700-ft. level. No showings of importance were reported.

### San Ardo Try Pumps

Superior Oil's Orradre No. 6 test on Sec. 6-23s-11e in the San Ardo area of Monterey County has been finished at 2821 ft. for 13 barrels daily. Northeast of San Ardo, Helm Company and Hans R. and Robert Sumpf are making hole at 1150 ft. with Adrian-Orradre No. 1 on Sec. 31-21s-11e. Texas Company last was reported drilling at 6405 ft. with its Gould No. 1 on Sec. 9-19s-6e at Reliz Canyon, and was ready to move in to drill its Reich No. 1 in the Oasis area on Sec. 24-20s-27e.

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# Rocky Mountain NEWS

**Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada**

News of major oil strikes in widely separated areas of the Rocky mountain region fanned the oil fever to greater intensity than ever in the wide open spaces between northern New Mexico and the plains of western Alberta during July.

While the eastern plain states recoiled from the worst flood damage in several decades, the sun blazed over the vast reaches of the Rocky mountains and the valleys and foothills. Planes from Tulsa, Denver, Casper, Billings and Calgary . . .the oil centers of the big new petroleum empire . . . rushed scouts, lease hounds and geologists to the latest surprise centers of activity.

There were new oil finds of not only regional, but national interest in Montana, Wyoming and New Mexico.

Great significance was attached to Shell Oil Co.'s discovery near Richey, Mont., hailed as the first strike on the Montana side of the vast Williston Basin which spills over from western North Dakota into Montana and Manitoba. Shell, the poor "Cinderella" of the oil searchers in the Rocky mountain region for several years, apparently had a momentous find. A company spokesman, declining to be identified, said the discovery in the northeastern corner of Darwin county (19-23n-50w) "shows there is more oil in the structure than in the entire state of Oklahoma." This sounded pretty strong, but apparently was based on the fact that the Madison line proved to be porous in the large structure. The oil, 38 gravity, was reported to be producing around 1,000 bbls. daily.

All S. F. Bowlby, Shell vice president in charge of exploration and production for the Rocky mountain region, would say was that a 40-minute drillstem test made between 7183-7253 ft. flowed high gravity oil at "a substantial rate." Located on Northern Pacific railroad land, the well was the first to show commercial production in the Montana side of the Williston Basin.

Significantly, Northern Pacific railroad stock rose three points in a matter of minutes and volume of shares traded on the 12th of July (when the discovery was rumored) jumped from 3,500 to 23,400. The well is about 100 miles southwest of Amerada Petroleum's province opener in the Williston Basin of North Dakota, which last April flowed oil from a depth of 11,000 ft. Conservative Shell officials said the discovery "points to a significant addition to the nation's oil reserves."

The company had planned to venture as a 15,000 ft. Madison test, but hit the pay zone at 7390 ft.

It was too early yet to say definitely whether the strike had been made in Madison or Devonian. Amerada's discovery was tagged as Devonian, similar to Alberta production. Northern Pacific owns extensive acreage in the Williston Basin. Two other companies have staked locations on NPRR land, one of them close to the Shell discovery. The so-called Richey area in Montana is part of the long Baker-Glendive anticline which stretches across several Montana counties.

Right on the heels of the Montana strike came news of an important regional discovery by General Petroleum Corp. at Manderson, Wyo. The venture, Mabel S. West in section 20-


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50n-92w south of the new Bonanza field, flowed at the rate of 20 to 30 bbls. hourly during a 75 minute drill-stem test from the Embar lime, testing 20 percent hydrogen sulfide. GP has sulfur bearing gas in its new field at Slick Creek, southeast of Worland. The new discovery had been deepened from old total depth of 5791 ft., finding the Embar pay zone from 7227-7281 ft. Oil was rated initially between 35-40 gravity. It was the second major discovery for General Pete in Wyoming since the first of the year, the first having been made at Tip Top in the southwestern part of the state.

Important, too, were other strikes in Wyoming, Utah, Colorado and New Mexico.

Sharples Oil Co. of Denver established another new pool for the general Sussex-Meadow Creek area of Johnson county, Wyoming. The wildcat in the Southeast Meadow Creek area (19-41n-77w), about two miles southeast of production in Continental's Meadow Creek field, found 46 gravity oil in the Lakota sand below 7688 ft., accompanied by strong gas pressure. It was a typical Lakota oil well for this area, with production predicted anywhere from 100 to 700 bbls. per day under choke. And it was the sixth Lakota pool for the area.

The Utah scene was enlivened when Carter and Continental revealed that their joint venture at Duchesne Unit (No. 1 Tribal, 17-4s-4w) flowed oil from the Basal Green River formation. Initial tests showed as much as 25 percent water, likely drilling fluid. The oil had a pour point of 100 degrees, higher than that at Roosevelt and Gusher pools. Producing zone in this wildcat, 35 miles southwest of the Roosevelt field, was called between 7486-7596 ft.

In Colorado, Plains Exploration Company's discovery in the Logan area at No. 1 Dalke (22-8n-54w) flowed six bbls. oil hourly thru tubing; and swabbed 300 bbls. oil daily. Located between Yenter and Merino fields, it established another oil pool for the booming northeastern Colorado portion of the Julesburg Basin. Sinclair, Shell and others have acreage scattered thruout the area.

And in the South Largo area of Rio Arriba county, New Mexico, Thomas Doswell's wildcat, the No. 2 Scott Federal in 9-26n-6w, found oil in the Tocito sandstone (above the Dakota). It was a surprise for the San Juan Basin. Gas hit the surface in five minutes. Oil flowed in 18 minutes, with the recovery listed at six bbls. per hour along with gas flow estimated at two million cubic feet daily. Oil is above 50 gravity. The drill stem test was made between 6605-6700 ft. in this venture, located in the deep portion of the San Juan Basin northwest of Lindrith.

To the northeast of this new discovery, Continental is drilling a 10,500 ft. Pennsylvanian test.

Jumping back to Wyoming, Stanolind flowed its first Mesa Verde producer in the Beaver Creek field, Fremont county, for 195 bbls. oil in 18 hours thru choke. Pay was found at the relatively shallow depth of 3828 ft., total depth, while other oil production in the field is from the Tensleep below 11,000 ft. Stanolind plans a series of five wells to develop the Mesa Verde sand, relatively rare as an oil producing horizon in the Rockies.

Continental's new pay discovery in the South Elk Basin field of Park county logged good saturation in the Madison lime below 7285 ft. after deepening from the Tensleep sand at 7035. The well, No. 7 Ida Goodstein, is in 20-57n-99w. Principal production in nearby Elk Basin, Wyoming's largest field, is from the Madison.

All efforts in North Dakota were not crowned with success. Union Oil of California plugged a wildcat in the Munich area, Cavalier county, with the well bottomed in granite at 3409. Undismayed, Union continued a series of tests in the general Devils Lake area of Cavalier county. It was joined in the exploration program by Hancock Oil Co. of Los Angeles and Signal Oil & Gas Co.

Ajax Oil of Casper is drilling a venture in Pierce county, southwest of Devil's Lake. And Amerada was still fishing at the No. 1 Iverson in Williams county, which made history as the first Devonian find in the Williston Basin this year. The company is preparing to spud another wildcat at the No. 1 Bakken in section 12-157n-95w, northwest of the Beaver Lodge discovery.

The Indians found little interest in an offering of tribal lands in the North Maverick Springs area of Fremont county, Wyo. Lively bidding was conspicuous by its absence. The only bidder, in fact, was Continental, offering

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$21,214 for 3,500 acres at the agency sale July 6. With the purchase goes a commitment to drill a Tensleep well around 4,000 ft. within the year.

Another interesting Julesburg Basin test is shaping up in Garden county, Nebraska, with McCarty-Coleman of Wichita Falls, Tex., farming out a three-quarters interest in the nearly 80,000 acre Eldred ranch from Stanolind. Patrick Daugherty, Denver geologist for the independent operator, said a 3900 ft. venture will be drilled to test Dakota sands. Location is section 25-20n-46w, along the Garden-Morrill county line.

Gulf is starting a wildcat in southwestern Nebraska at the No. 1 Sisson in Banner county, the firm's first wildcat in the current Julesburg Basin play. It will seek the Morrison sand in an area 12 miles southwest of nearest production.

Continental is continuing exploration in Utah with a location for a stratigraphic test in the Watson unit of southern Uintah county. It will be the first of a series of tests to evaluate a sizable lease block south of the Red Wash field, where production comes from the Basal Green River formation. To the east is Roy M. Johnson's recent gas find in the Hells Hole area of Rio Blanco county, which flowed around 11 million cubic feet gas daily from Mesa Verde at only 2496 ft. Johnson now is drilling below 5500 at the No. 2 Fee in the Bonanza area of Uintah county, after finding encouragement in numerous gas shows in the well.

Carter, however, may plug its fifth Vernal, Utah wildcat. No important shows were reported for the No. 1 Rockwood-Brown, bottomed at 10,507 ft.

Ohio Oil, pioneer in Julesburg Basin developments, has opened a district office in Sidney, Nebr. The opening was the occasion for much fanfare and Jack Lowe, editor of the Sidney Telegraph, issued an outstanding special edition reviewing progress of the Julesburg Basin of southwestern Nebraska and northeastern Colorado.

Numerous other developments spurred the oil fraternity to greater efforts in the Rocky mountain region.

In an extension effort east of the long producing Big Muddy field in central Wyoming, Southern Production and Dyer Drilling flowed oil from a surprise pay zone at only 1800 ft. Production was thought to be from the Shannon or Sussex sands.

In Sheridan county, Wyo. Helmrich and Payne of Oklahoma City took over a farmout 15,000 acres in the southeast Arvada area from Stanolind and Union, will sink a deep test to explore this so far unproductive northwest side of Wyoming's big Powder River Basin. Nearby, at Ash Creek, Shell Oil was fishing at 8,220 ft. on its scheduled 10,500 ft. test.

Typical of the prosperity accompanying oil developments was the report of the county assessor at Buffalo, Wyo. He said total taxable valuation rose from around 10 to 14 million dollars as the result of increased production in the prolific Sussex Meadow Creek fields, discovered in '48. This eased the load on property owners throughout the county.

Early completion of the Platte pipeline from the Rocky mountain region to the St. Louis area is still a matter of vital interest to operators. This was underscored at a recent meeting of the Rocky mountain chapter, AAODC, in Casper and other oil centers. Members were urged to call on Wyoming senators for aid in pushing for allocations of steel pipe to make possible completion of the line.

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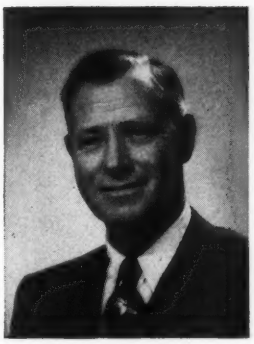

## How busy can you be?

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# THIS LAUGH

# OFF!!

The bride, white of hair, stoops over her cane,
Her footsteps, uncertain, need guiding,
While down the church aisle, with a wan toothless smile,
The groom in a wheel chair comes riding.
And who is this elderly couple, thus wed?
You'll find when you've closely explored it,
That here is that rare, most conservative pair
Who waited 'til they could afford it!

---

"By the way, who is that long and lank girl standing over there?"

"Sh! She used to be long and lank, but she's just inherited $100,000. She's tall and stately now."

---

I'll just fine you for speeding today, but next time it'll be jail.

---

I get it. Fine today—cooler tomorrow!

---

"Corporal, where did you get that black eye?"

"In the war."

"What war?"

"The boudoir!"

---

"Why," asked a Sunday School teacher, "was Solomon the wisest man in the world?"

A bright-eyed little girl raised her hand and answered: "Because he had so many wives to advise him."

---

Jim—"Have any of your childhood dreams been realized?"

Joe—"One of them. When my mother combed my hair, I used to wish that I didn't have any."

---

A small town is a community where everyone knows whose check is good and whose husband isn't.

---

"No man should keep too much to himself." The Bureau of Internal Revenue concurs.

---

Marriage is a mutual partnership—with the husband the mute.

---

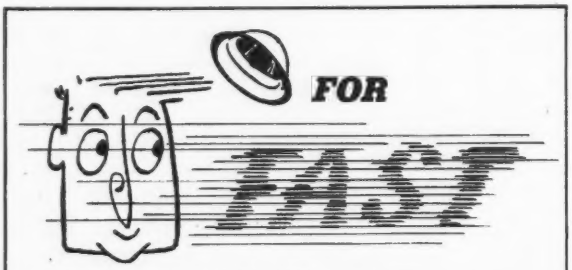
Jinx: "Smith is not only a bad driver—he's a crook!"

Binx: "How so?"

Jinx: "We had a collision, and he gave me a drink to steady my nerves—and then the police came."

---

A chorus girl showed her friend a check given her by a "sugar daddy" and returned from a bank marked "Insufficient Fun."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